

Missouri Property Assessment and Taxation Report

JOINT COMMITTEE ON TAX POLICY

**Representative Mike Sutherland, Chair
Senator Michael Gibbons, Vice-Chair**

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Pursuant to Section 21.811, RSMo, the Joint Committee on Tax Policy shall review and analyze the local property tax assessment practices of this state and make recommendations to the general assembly based on its findings. The committee must submit a final report by June 30, 2006. The committee is required to report to the State Tax Commission any concerns it finds regarding the state's assessment practices as outlined under chapter 137, RSMo. The following report is intended to satisfy these statutory requirements.

The Assessment Process

The most stable and reliable source of revenue for schools and local governments in Missouri is the property tax. In 2004, local governments received 4.9 billion dollars in property tax revenues.¹ A county assessor is elected or appointed to carry out the function of assessing parcels of property in each respective county. The assessor of each county is responsible for basing their assessment on “true value of money,” synonymous with the fair market value of the property, except agricultural property where the true value is based on the productive use of the land.²

There are four types of property. Each type of property has a different assessment percentage or rate that is charged to the type of property. For residential property, a rate of 19% is charged. Agricultural property is taxed at a rate of 12%. Utilities and commercial property are taxed at a rate of 32%. And personal property is taxed at a rate of 33.33%.³

Once an assessment is determined, the property tax is calculated. This calculation is as follows:

$$\text{Assessed Value} \times \text{Assessed Rate} \times \text{Applicable Tax Rate} = \text{Tax on Property}$$

To further illustrate the application of the property tax calculation, an example using real numbers is as follows. The value of a residential parcel of property is \$100,000. The assessed rate for residential property is 19%. The applicable tax rate levied by the local government is \$6.00 per \$100 of assessed value. The equation is:

$$\$100,000 \times 19\% \times .06 = \$1,140$$

The owner of the property would have a resulting property tax liability of \$1,140.⁴

Methods for Determining the Value of Property-

Assessors can use three different methods for determining the value of property: the cost approach, the market approach, and the income approach. For the cost approach, the assessor first estimates the value of the land as if it were vacant. The assessor then adds the amount it would take to replace the existing structure with one of similar construction and amenities, including current costs of materials and labor, profit, overhead, permit fees, and the like. If the structure is not new, the assessor then applies depreciation from all causes and then subtracts that amount from the calculation of replacement cost.

In the market approach or sales comparison approach, the property is evaluated by comparing similar properties that have recently sold. Adjustments may be made for differences such as a garage, finished basement, or better location of those comparable properties. This can be the most reliable approach for residential property where there are frequent sales as well as similarities in properties.

Using the income approach, the assessor first estimates potential gross income from rentals, then subtracts an amount for vacancies and operating expenses. The amount of net income is then converted to a value for the property using a process called capitalization. The income approach is primarily used for apartments, shopping centers and office buildings.⁵

Reassessment will often give political subdivisions substantially more money every two years due to the increase in the value of the property. If this should occur, political subdivisions are required to rollback their tax rates.

Rollbacks

A rollback is an adjustment of the tax rate downward. The allowed increase in tax revenues over the previous year for cost of living was 2.3% in 2004 (there is a maximum of 5% allowed). After this allowance, and that for new construction during the previous year, the tax rates must be reduced to offset the valuation increase.

The constitutional requirement of a vote by the people for a tax increase was part of the Hancock Amendment. Modeled after a Michigan law and named after Springfield businessman and later U.S. Congressman Mel Hancock, the Hancock Amendment imposes strict guidelines for the amount of revenue that Missouri state and local governments can collect. A substantial increase in the revenues collected from property taxes by local subdivisions shall not exceed the previous year's revenue in-take while adjusting for both new construction in the political subdivision and subsequent percentage increases in the General Price Level.⁶ There are, however, different interpretations of how and when the rollbacks should be administered.

A hypothetical example may provide a better understanding of the explanation. A local subdivision levies a tax of sixty cents for every \$100 of assessed property in year one. In year one, the local subdivision has a total residential property value of one billion dollars (residential property value is used in this case for simplification so the standard 19% rate can be used). The calculation would then be:

$$\$1,000,000,000 \times .19 \times .006 = \$1,140,000$$

Two years later the same property is reassessed. A different value is obtained because the residential property throughout the local subdivision has increased in value. In year three, the same residential property value that was assessed in year one is now worth \$1.1 billion in year three, not including new construction. The local subdivision levies the same sixty cents per every \$100 of assessed value as it had done two years prior. The calculation in year three would be:

$$\$1,100,000,000 \times .19 \times .006 = \$1,254,000$$

However, the Hancock Amendment limits the amount that a local subdivision can increase its property tax revenues to the percentage of increase in the General Price Level. From year one to year three, the consumer price level increased by 3.5%. The amount of increase in the property value for the local subdivision in question between years one and three was 10%. The local subdivision, by charging the same sixty cents per every \$100 of assessed value, collected a 6.5% excess in taxes. To keep in line with Missouri Constitutional mandates, the local subdivision should only increase their revenue by the 3.5% allotted by the increase in the General Price Level; essentially, they should only collect \$39,900 more than in year one, bringing their year three total to

\$1,179,900. To calculate the rate per every \$100 of assessed value that they should have charged, a simple algebraic equation can be used to provide an answer:

$$\$1,100,000,000 \times .19 \times R = \$1,179,900$$

$$R = \$1,179,900 / (\$1,100,000,000 \times .19)$$

$$R = .00564545$$

The local subdivision should have rolled back their rates to about 56.5 cents per every \$100 of assessed residential property to keep in line with the General Price Level. The levy of sixty cents per every \$100 of assessed property is essentially a tax increase.

The Appeal Process-

If the property owner should disagree with an assessment, he or she may make an appeal. The first form of appeal, an informal appeal, occurs when the property owner requests a meeting with either the county assessor or an assessor in the county assessor's office to discuss how the assessment was conducted and how the office valued the property. Many of the disagreements are resolved at this level. If the property owner is still dissatisfied, following the informal meeting, the property owner can appeal to the county board of equalization. A hearing will be scheduled where the board will hear evidence from the assessor and the property owner regarding the value of the property which is the subject of the appeal. If still dissatisfied with the decision rendered by the board of equalization, the property owner has a right to appeal to the State Tax Commission (STC) by August 15 in first class counties or St. Louis City, and September 30 in other counties or 30 days after the final action of the board of equalization, whichever date is later.⁷

The State Tax Commission: its Organization, Functions, and Processes

The State Tax Commission is the executive agency which administers the laws relating to property tax assessment. Created in 1945, the State Tax Commission obtains its authority from Article X, Section 14 of the Missouri Constitution and additionally from Chapters 137, 138, 151, 153, and 155 of the Revised Statutes of Missouri.

The Commission itself is made up of 3 members appointed by the Governor with the advice and consent of the Senate. The members serve staggered terms of six years with one member being appointed every two years. In order to perform the six basic functions assigned to the Commission, the STC has divided their staff into five sections. These sections include: Administration, the Legal section, the Ratio Study section, the Original Assessment section, and the Technical Assistance section.

The 6 basic functions performed by the STC include:

1. Equalize both intercounty and intracounty assessments
2. Conduct de novo judicial hearings regarding valuation and classification appeals from local boards of equalization in individual assessment cases
3. Formulate and implement statewide assessment policy and procedures to comply with Constitutional and statutory mandates
4. Supervise local assessing officials and programs to ensure compliance with statewide policy
5. Conduct ratio studies to determine the assessment level in each county and measure the quality of the assessment program
6. Assess the distributable property of railroads and utilities

While it is the duty of each county's assessor to assess the properties within his or her own county, it is the duty of the STC to assist the assessors with their duties and ensure that the assessor makes a fair assessment of each parcel in the county. To accomplish this function, each county must develop and implement a comprehensive assessment plan agreed upon by the county assessor, county commission, and the STC. Included in the comprehensive assessment plan are a statement, a budget, and a detailed timeline of how the plan will be implemented. The plan begins in the even numbered year and frames the tax day (January 1st), providing enough time before and after tax day to gather market information, review properties, determine market tendencies, and adjust assessments accordingly. The STC reimburses each county for about half of their assessment costs provided that the county complies with the plan it had developed.⁸

Once each county's assessment plan is approved, the county assessor is responsible for implementing the plan. The STC's Technical Assistance Section performs routine visits to assist the counties and determine if each county is in compliance with their assessment plan. If the STC finds that a county is not in compliance with their assessment plan, the state can withhold the reimbursement funds until the matter is resolved. The STC may also issue compliance orders to county assessors to enforce the law and ensure uniform treatment of property throughout the state.⁹

To make certain that the county assessors are performing quality assessments and to determine the local assessment levels, the STC conducts a ratio study, specifically an appraisal ratio study. In this appraisal ratio study, thirty-five to fifty parcels are randomly selected within each subclass of property. The STC staff appraisers gather market costs, market sales data, and market rental information in the county and use the data to

establish values for each property. Commission appraiser supervisors check to see if the appraisal is in compliance with standards. The final values of the parcels are then compared to those of the county assessor. From that mathematical equation, a “ratio” is established.¹⁰

Ratio Studies and Statistics

In testimony from a committee hearing conducted on March 13, the State Tax Commission provided an explanation of ratio studies and their subsequent uses. Included with the explanation was a description of the various statistical techniques employed in ratio study analysis. Because the ratio studies are one of the cornerstones of the assessment process and one of the primary responsibilities of the State Tax Commission, the written testimony from the State Tax Commission regarding the ratio studies they conduct is included with the report as a part of the appendix.

Property Tax Relief for Senior Citizens and Disabled Citizens

Two options are available to qualifying senior citizens and disabled persons who are subject to steep increases in their property values. The first program, the Missouri Property Tax Credit, allows senior citizens and disabled persons on limited incomes to qualify for refunds or income tax credits based upon property taxes paid or rent paid on their residences. The “rent” includes money paid for a home, a room in a nursing home, an apartment, or a mobile home unit. This law provides the eligible taxpayer with indirect property tax relief, but many people are unaware that this assistance is available. To qualify for the tax credit, an individual or an individual’s spouse must either:

1. a. Be sixty-five years of age as of December 31st of the tax year OR
b. Be 100% disabled or a disabled veteran OR
c. Be sixty years of age or older on or before December 31st of the tax year and
have received surviving social security benefits; and
2. Have a household income if married filing jointly of \$27,000 or less, or
\$25,000 if filing as a single taxpayer separate and;
3. Have paid property tax or rent for the tax year in question on the primary residence.

The second program, the Homestead Preservation Act, allows qualified senior citizens or 100% disabled individuals to apply for a credit on their real property tax liability if they experience an increase in property tax liability of more than 2.5% in a non-reassessment year or 5% in a reassessment year. Pending legislative appropriation, the credit would be equal to the amount that exceeds the 2.5% or 5% increase in taxes. If funding for the credit should be less than 100%, the credit will be a flat statewide percentage based on the appropriated amount. This credit will be applied against the taxes for the following year. In order to qualify for the credit, an individual must:

1. Be age 65 years of age or older (if married, one spouse must be at least 65 or older and the other at least 60) or be 100% disabled; AND
2. Have a federal adjusted gross income of no more than \$70,000 for the year; AND
3. Have paid all real estate taxes for the current year and the previous two years;
AND
4. Own and occupy the property (home and up to five acres).¹¹

Problems with the Assessment Program¹²

1. Lack of Sales Data

One of the ideas repeated throughout the testimony was the need for more sales data. The assessor, utilizing the market approach discussed earlier, can then use the sales data to assess other properties in the area or use the data as a comparison to assessments already conducted. Increasing the amount of sales data was recommended by several individuals who testified before the committee.¹³

Additional testimony proposed providing additional funding to the STC for such an endeavor and urged the committee and General Assembly to appropriate money for the task as soon as possible. Under the proposal, the sales data obtained would remain confidential. In addition, the witness suggested the General Assembly allow the STC to enter into agreements with non-governmental entities in order to obtain and use proprietary information without the information being subject to the sunshine law.¹⁴

2. Computer Software

Another problem reported by witnesses who testified was the computer software used by assessors across the state. Testimony suggested that the CAMA software used currently requires much maintenance, high labor effort, and is not uniform throughout Missouri (different counties use different types of CAMA software).¹⁵ Further testimony suggested an advisory committee (discussed later) be assigned the task of both choosing and implementing a system.¹⁶

3. Ratio Studies

As stated earlier, one of the duties of the State Tax Commission is to ensure that assessments are equitable both between counties and within counties. To ensure this happens, the STC conducts an appraisal ratio study. They randomly choose between thirty-five and fifty parcels within each subclass of each county and appraise each parcel to make sure that the assessors are accurately appraising the properties. From their data, they form a ratio for each county. The appraisal ratio study has both strengths and weaknesses.

Strengths:

1. Each parcel within the county has an equal chance to be chosen and appraised by the STC.
2. The study uses all three appraisal techniques: cost, income, and market approaches.
3. Established principles are used to formulate value estimations based on unbiased analysis of the market.
4. Commercial real estate is analyzed on a property-by-property basis by a trained and experienced appraiser. Physical, functional, and external factors that affect the property are observed. Non-realty items can be identified and removed where appropriate.
5. An appraiser who is knowledgeable of soils, topography, crop yields, and productivity value procedures must visit each agricultural property to conduct an inspection.
6. The integrity of the study has withstood legal challenges.

Weaknesses:

1. The study is labor and cost intensive. Over 10,000 individual appraisals must be conducted in a two-year assessment cycle.
2. Final estimation of value is based on the experience and knowledge of the appraiser (if there is a lack of market data).
3. The study could be viewed as subjective if the standards of appraisal methodologies are not adhered for each appraisal.
4. Two reasonable and experienced appraisers can disagree on the assessment after analyzing the same set of data.¹⁷

However, testimony from numerous witnesses questioned the accuracy of the appraisal studies performed by the STC. A study conducted by the Missouri Growth Association and the Public Policy Research Center at UMSL concluded that two out of three appraisals showed substantial differences in two out of the three assessment jurisdictions.¹⁸

Besides the appraisal ratio study that the STC implements, there are two more options available to the Commission: the sales ratio study and the appraisal ratio/sales ratio hybrid. The sales ratio study is currently employed by county assessors to compare the new assessments with market conditions before values are finalized. The studies conducted by the assessors are submitted to the STC for review by the technical assistance staff. The sales are gathered and verified to be arm's length transactions and not to include personal property, financing incentives, or other factors that might skew their usefulness as market indicators. The verified sales are then time adjusted to the tax

date and compared against the jurisdiction's property tax assessments. The study has strengths and weaknesses.

Strengths:

1. The study is generally objective in that arms-length transaction sales are used to determine the level of assessment.
2. The study is fairly easy to develop and is less time consuming than the other two ratio studies mentioned.
3. The study can be conducted with limited resources.
4. This type of study is a valuable tool for use by local assessment officials where statistical validity and population representation are not compulsory.

Weaknesses:

1. The entire population is not being tested. Only properties that have sold are used in the study. As such, statistical inferences are developed regarding the population, but the subset is not representative of that population.
2. A limited number of sales leads to extreme bias and does not reflect the true level of assessment or the quality of the assessment program.
3. The study encourages "sales chasing" by local assessment officials. Consequently, spot reassessment creates disparate treatment of like property that facilitated court-mandated statewide reassessment.
4. Sales in rapidly growing areas could influence the statistical inferences developed from a study, thus causing a bias and an inaccurate reflection of the true level of assessment of the whole class of properties within the population being studied.

5. Because of the complexities of commercial real estate, a sales ratio study is not useful. Commercial real estate must be analyzed on a property-by-property basis due to the myriad of physical and functional differences. There are many factors that may be reflected in the nominal selling price, which are not assessed as real estate. For example, such items as going concern value, franchise values, financing terms, furniture and fixtures, and personal property limit the use of sales ratios applied to commercial real estate assessments.
6. Sales ratio studies are not applicable to the agricultural subclass. Since agricultural land is assessed by its productivity value, only the appraisal ratio method is appropriate.¹⁹

The appraisal ratio/sales ratio hybrid is the type of ratio study that the STC would like to implement. In this ratio study, a statistically validated number of sales is chosen within each property type. If an adequate number of sales is not available, then appraisals are substituted to fulfill statistical requirements. The STC is recommending this type of ratio study for all counties that have sales data disclosure requirements. The study has both strengths and weaknesses as well.

Strengths:

1. The study mitigates the disadvantages of using the strict appraisal or strict sales system alone.
2. The study reduces the number of appraisals required in a strict appraisal study, and as such, reduces the resource requirements.
3. Stratifying the population ensures full representation of all taxable tangible real property.

4. The study diminishes the debate regarding final estimates of value.

Weaknesses:

1. Statistical procedures and software must be developed to accurately stratify the population that is indigenous to each particular county.
2. The study is dependent on the number of valid sales that are readily available. Consequently, any jurisdiction without adequate sales data would be problematic.²⁰

One witness questioned whether the STC should conduct the equalization study. It was suggested that the equalization study should be performed by an independent entity whether it be the State Auditor, another state agency, a university, or a private company.²¹

4. Budget Constraints

Testimony from witnesses also suggested that the State Tax Commission has been inadequately funded; over the past three years, the State Tax Commission's budget has been cut by 30%. The testimony noted the budget cuts have resulted in fewer seminars and less training offered to assessors' staffs. Recommendations included appropriations for a statistical analyst that would research and check for inequitable intracounty or intercounty assessments.²² Further testimony suggested the need for increased funding and resources for county assessors and their staffs by increasing the per parcel appropriation that assessors receive.²³ The increased per parcel allocation would increase personnel capabilities to perform on-site reviews and could provide GIS digital mapping that would increase the efficiency and productivity of assessors.²⁴

5. Property Tax Statutes

Several witnesses testified to the notion that Missouri's statutes are outdated. It was suggested that the statutes do not account for advances in technology, statistics, current assessment standards, and are often in conflict with the requirements of biannual assessment and multiple subclasses of real property.²⁵ Suggestions to remedy this problem include a systematic review of the laws and practices regarding the property tax. Specifically, one witness proposed the STC focus on intracounty equalization in the odd years followed by a ratio study which provides evidence for inter-county equalization, and complete the process with inter-county equalization in the even years. Furthermore, testimony indicated that statutes are more specific in regards to both the adequacy of assessment results and how intracounty and intercounty equalization should be attained.²⁶

6. Litigation

Some witnesses noted that one problem that the assessment process faces is the perceived costly and time-consuming litigation against the State Tax Commission. While lawsuits are an inevitable part of the separation of powers, testimony suggested that lawsuits challenging the State Tax Commission's orders should be filed either in Cole County, where the courts are accustomed to state agencies being sued, or a neutral county circuit court.²⁷

7. State Tax Commission

One witness testified extensively regarding the administration of the State Tax Commission.²⁸

The witness suggested the STC hear fewer cases and issue rules and supervisory orders to establish more uniformity and mandatory precedence in the process.

The witness proposed that a separate organizational entity conduct an evaluation of how well the STC performs its supervision of assessors and boards of equalization.

The witness proposed a separation of the administrative hearing function of the STC from the STC itself. Under the witness's plan, a separate administrative hearing department would hear the cases instead of the Commission's staff lawyers.

The witness suggested a review of how reimbursement of a county's assessment costs is to be administered.

The witness suggested the STC increase the monitoring of boards' of equalization proceedings.

The witness proposed the idea of Missouri having 4 to 6 assessment districts as well. Under the plan, he explained the economy of scale would enable each district to acquire the appropriate technology and staff expertise that is lacking in many assessors' offices. Further expounding on his plan, he commented that if the change over were to occur in 2008 or 2010, assessors and assessment personnel could plan for the change without suffering a sudden disruption. One organization supported this idea on a smaller scale. Citing limited expertise and experience with commercial appraisals by some counties, the association expressed a need for regional commercial appraisers which would serve a specified region.²⁹

Testimony from the witness also expressed a need for a more thorough review of the appeals process indicating that it needs clarification, standardization, and greater accountability.³⁰

Another witness suggested hiring an executive director for the State Tax Commission. Under this proposal, the Commission itself would retain the authority to

accept or deny recommendations from the executive staff and also act as an arbiter for disputes between the executive staff and the counties. The executive director would be responsible for executing the rest of the duties prescribed to the STC.³¹

8. *Rollback laws*

According to one witness's testimony, the statutes regarding rollbacks leave many questions and possibly result in misinterpretations. He cited that a lawyer familiar with the statute claims that the common interpretation of the statutes is incorrect.³² A memo produced by Missouri Senate Research agrees with this claim. The common interpretation is that taxing jurisdictions need to rollback their tax rates only if their rate exceeds their tax ceilings.³³

A more thorough examination concludes that the rollbacks can be unfair to certain types of property. A county can have one type of property increase in value and another type of property decrease in value. Currently, the rollback rate is determined by the aggregate increase in property taxes collected of the different types of property. This means that the residential class of property could be paying more than their fair share of taxes while commercial property pays less than their fair share or vice-versa. A suggestion to deal with this problem is to have different rollback rates for the different types of property.³⁴

Testimony suggested that property owners do not know the rates that they are being charged. To resolve this problem, the testimony recommended that taxing jurisdictions be required to post their tax rates and tax ceilings in a place accessible to the public.³⁵ This suggestion was echoed developed by further testimony which recommended that political subdivisions inform the public of the previous and current

year's tax rate, new construction growth, assessed valuation of the different subclasses of real property, and the rise in the general price level shortly before they set their tax rate for the following year.³⁶

Additional testimony suggested that Missouri conduct a study of the effectiveness of the rollback laws and then study policy alternatives that would remedy any of the problems found as a result of the study.³⁷

9. Senior Citizens

One witness testified that senior citizens on fixed incomes cannot afford the property tax levied on them every two years. One suggestion to deal with this issue is to freeze property tax payments from senior citizens until either death or until the property is sold. The property tax payments would then be collected after the sale of the property.³⁸ It should be noted however that the effects of the Homestead Preservation Act have not yet been realized. It may be prudent to wait to see if the act helps with this problem.

10. Property Taxes Are Too Burdensome

One witness believed that property taxes are not a good source of revenue. In addition to eliminating the property tax, the witness also suggested that Missouri adopt California's Proposition 13 of 1978, where homeowners pay a tax on the purchase price of their home. Furthermore, the witness suggested that reassessment should be capped every year at 2% or to the realized growth of the Consumer Price Index.³⁹

11. Elimination of Personal Property Tax

One witness testified that Missouri should eliminate the personal property tax and only tax real property. He testified that large companies' personal property depreciated,

while small “mom and pop” stores paid the full amount of their personal property taxes. Overall, the witness stressed simplification of the property tax system.⁴⁰ An association testified that personal property taxes do take a disproportionate amount of assessors’ time and resources.⁴¹

12. Building Permits

One problem that was addressed during committee meetings was the knowledge of new construction in an area. In order to keep track of this, testimony suggested that Missouri require that counties issue building permits for new construction.⁴² An assessor in a city that has building permits commented that the permits are useful in reassessment as well because they let the assessor know of the specific amenities of a parcel of property.⁴³

13. Shifting Burdens

While the property tax has consistently provided the state with a reliable source of revenue, one witness suggests that the burden among the different subclasses of real property taxed has shifted. Citing data from 1984 through 2005, residential property has experienced an increase of the property tax burden from 38% in 1984 to 48% of the total burden in 2005. At the same time, the agricultural burden has decreased significantly from 12% in 1984 to just 3% in 2005. While the witness did not provide solid evidence to the reasons why such a shift in the burden has occurred, he did say that this problem needs examination.

14. I.A.A.O. Compliance

One witness suggested that Missouri adopt the regulations setting compliance standards for level of assessment, uniformity, and vertical equity.⁴⁴

15. Advisory Committee

Testimony suggested that an advisory committee consisting of representatives of assessors, collectors, county clerks, county courts, county prosecutors, the Missouri General Assembly, and the STC reach a consensus recommendation that will assure effective enforcement while providing counties with reasonable due process.

Further testimony suggested another advisory committee whose duty would be the continuing study of the property tax practices. This committee would consist of a representative of local clerks, collectors, assessors, and recorders, state executive representatives of the STC, Auditor, GIS, Attorney General, and Governor, and state legislative officials to represent appropriations, tax policy, and local government.⁴⁵

16. Grants

Citing a need for positive reinforcement in the assessment process, testimony suggested Missouri allocate money for a pool of grants to be disbursed to counties based on merit and need.⁴⁶

17. Standard Appraisal System

Representatives from Vanguard Appraisals, Inc. testified regarding the benefits of having a standardized appraisal manual such as one developed for the state of Iowa.⁴⁷

Research Conducted by the Committee

Following up from the report submitted to the committee by one of the witnesses in December, the committee contacted states listed in the report regarding the collection

of sales data as well as those states that are in the process of implementing a uniform computer software system.

Sales Information

Alabama:

For residential properties, Alabama relies upon the multiple listing services in local areas. An agreement is reached between realtor associations and local governments where they would trade information: the government provides tax records and property information (such as square footage) in exchange for sales information. Usually, however, smaller counties do not have MLS data available. To substitute, the counties review recorded deeds in the timeframe being studied and check for arms length transactions to make sure the data is relative to the market. For commercial property, an agreement is reached with commercial appraisers where the state provides them with records and information they have for commercial data from the appraisers themselves. For residential property, those homeowners 65 or older or disabled can apply for a homestead tax credit (available to those who own residential property). Alabama asks that they sign an affidavit regarding the most recent sales information available in exchange for the tax credit.

Contact: Jane Mordis, (334) 832-1303

Alaska:

Sales data collection is the responsibility of the local counties. Local counties will send out two letters, one to the buyer of the property and one to the seller of the property. If there is no compliance, then one follow-up letter is sent.

Contact: Steve Vansant, steve_vansant@commerce.state.ak.us, (907) 269-4605

Idaho:

All of the ratio studies are conducted by the individual counties. Some of the counties have agreements with local boards of realtors and some look at the deeds to determine whether or not the sale is an arm's length transaction and collect contact information to send out a letter. Returns on sales information by letter has about 40-50% success rate. Idaho has a strict equalization range (within 5% for school funding and 10% for local financing); however, Idaho works with each local county to get the equalization correct. Initially, many of the counties flunk their school funding equalization requirement percentages.

Contact: Alan Dornfest, adornfest@tax.idaho.gov, (208) 334-7742

Mississippi:

Mississippi assumes responsibility for gathering sales information. The state sends out one letter (no follow-up) to both the guarantor and guarantee with questions that determine if it is an arms length transaction. The letter has about a 50-55% success rate. Sometimes the individual counties (which are required to have a sales file) have

more information in which case that data is used. As of 1998, Mississippi conducts an equalization study every four years.

Contact: Rich Minton, (601) 923-7612

Utah:

The state relies on recorded deeds for the year to see which sales are to be included in the annual sales ratio study. The state of Utah assumes responsibility and sends out a questionnaire to both the buyer and seller of the property to obtain sales data. Should no answer be obtained, then one follow-up letter is issued. When available, data is used from local multiple listing services. Every effort is made to ensure that the transactions being used are arms length transactions and reflective of the market. In order for a sale to be included in the study, it must meet three listed requirements and then can be eliminated if it meets any one of the 14 listed stipulations.

Contact: Salt Lake County- Tom Leech, (801) 468-3065

Iron County- Ann Gurr, (435) 477-8312

Uniform Computer Software System

Kansas:

Kansas recently signed a contract in 2003 with Cole Layer Trumble (CLT, currently owned by Tyler Technologies) to replace their old uniform software system. They looked at 10 or more different systems and decided that CLT offered the most

versatility. Kansas is the first state to take full advantage of the CLT software. To implement, they installed the software in 10 “data counties” to learn about the system and work out all of the kinks. The return process, however, is taking longer than expected which will push their full implementation target date back one year. Kansas has plans to install the system in 25 or 26 counties a year hoping for a 2009/2010 statewide software uniformity target. It should be noted that Kansas does have a sales disclosure law which allows them to take full advantage of the features available in the CLT software. After asking whether a state could take full advantage of the software without increased sales data, the Kansas representative said he thought not.

Contact: Charlie Sowell (785) 296-4689

New Jersey:

New Jersey reported recently adopting a new software system also from Cole Layer Trumble. Currently, the web-based system is being tested in three pilot counties. Once the pilot study is finished (projected to be in 2008), New Jersey has plans to implement the system in six counties per year for three years (a total of 21 counties). After asking if a state without adequate sales data could take full advantage of the software’s features, the response was no, sales data was needed to fully utilize the system’s features.

Contact: Mark Gesuldi, (609) 984-3268

Maryland:

Maryland is currently reviewing proposals for a uniform software system. They attended the I.A.A.O. conference this year where seven different vendors were proposing systems. They are awaiting money from the executive branch to proceed. The state takes full responsibility for assessment functions. They have an assessor and state office in each of their jurisdictions. The data from those jurisdictions is reported to one central facility. The new software system (they plan) will allow them to access information about any of the jurisdictions from any of the jurisdictions.

Contact: R. T. Mills, (410) 228-3380 ext. 112, rtmills@dat.state.md.us

Agricultural Use Values

In addition, research was conducted regarding how agricultural use-values are determined. The following is a brief summary of how the state arrives at such values.

Agricultural property is different than the other two subclasses of property- residential and commercial. While residential property is taxed based on the market value of the property and commercial property is taxed based on the income that is generated from the business, agricultural property is taxed based on the land's potential for generating revenue.

Missouri has an ongoing contract with the University of Missouri's Agricultural Economics Department. Every two years, the department conducts a study which recommends use-values for the eight different grades of agricultural land. The study

divides the eight grades into two categories: fertile land (which is suitable for growing crops) and pasture land (which is more suited for grazing).

The professor who currently conducts the study, Kevin Moore of the Department of Agricultural Economics at University of Missouri- Columbia, noted in the 1996 study that the methodology developed in 1982 for arriving at the use-values, created by the department, may not accurately depict the actual use-values of agricultural land.⁴⁸ Citing 17 reasons for why the 1982 methodology was not representative of 1996 agricultural use-values, Moore set forth an alternative method for arriving at the use-values.⁴⁹ The alternative method is based on information that is available to anyone; it utilizes the crop and pasture rental rates published in Missouri Farm Facts as well as the capitalization rate published in Agricultural Finance Databook.⁵⁰

The subject of agricultural use values has been a focus of the University of Missouri- St. Louis's Public Policy Research Center (PPRC). In a report presented to the State Tax Commission on December 9, 2005, the PPRC delves into the history of the agricultural use-values in Missouri, citing the bi-annual studies from UM-Columbia's Department of Agricultural Economics and past actions and promulgations set forth by the State Tax Commission.

While the new method of calculating agricultural use-values may be simpler and more accessible to the public, there is a sense that the crop and pasture rental rates are representative of neither productive use of the land nor farm income. During the 93rd General Assembly, 2nd regular session, the 2007 budget includes a line item in the State Tax Commission's appropriations for \$25,000 to employ the Department of Agricultural Economics at the University of Missouri-Columbia to develop a new method for

calculating agricultural use-values. The effort will focus on creating a methodology that is accurate, certain, and reliable.

The actual process for implementing the agricultural use values may need to be examined as well. The way the process currently works is that the State Tax Commission receives the study conducted by UM-Columbia in October of every odd number year. The STC then hears testimony (usually in December of the same year) from those in the farming community to get a sense of the recent farming conditions. The Food and Agriculture Policy Research Institute (FAPRI), also an extension of the University of Missouri-Columbia, presents a report of the state of the farming community in Missouri.⁵¹

From this information and testimony, the STC promulgates a use-value for each grade of land by December 31 of the same year regarding the productive use of agricultural land. This rule can either be accepted implicitly or rejected explicitly by the General Assembly in the form of a concurrent resolution within sixty calendar days of the commencement of the regular session. If the General Assembly rejects the rule by concurrent resolution, then the use-values revert back to the use-values in place before the values were promulgated.⁵²

Recommendations

1. Sales Information

According to the I.A.A.O., “sales prices provide the only objective estimates of market values and under normal circumstances should provide good indicators of market value.”⁵³ Because of the importance of sales in determining market values, the

committee recommends that the State Tax Commission, in cooperation with the assessors, acquire as much voluntary sales information as possible by obtaining the information through a uniform letter which asks the buyer/seller to voluntarily disclose the purchase price of a parcel of property. The STC should design and implement a pilot study involving several counties which should provide evidence of how to collect voluntary sales information from the entire state in the future.

2. Ratio Studies

In addition, it is important for the State Tax Commission to use the sales information they collect. Adopting an appraisal-sales hybrid ratio study as they suggested in their testimony would provide the most efficient and reliable ratio study possible. The STC would realize savings in manpower by not having to appraise all of the properties in their samples. With objective market indicators, the ratio studies conducted by the STC would provide more reliable information to ensure counties are assessing at market value.

One of the major problems that the committee encountered in its investigative efforts is the disparity in size and resources of the various counties and one city in Missouri. Assessment in St. Louis County is far different than assessment in Worth County. The disparity lies in the size, the method of assessment, the resources at hand and the availability of information. As a result, the STC should adopt a sales ratio study for the three counties and city (St. Louis County, St. Charles County, Jackson County, and St. Louis City) with a sales disclosure law. It is a waste of time and resources for the STC to conduct appraisal ratio studies if objective market information is readily available.

3. Education of Assessors

One of the priorities of the Missouri Assessors Association is making sure that all of its members and their staffs have the education necessary to perform their jobs well. One of the provisions of Senate Bill 1140 and its House companion, HB 1996, was to bring the responsibility of coordinating the education of assessors under the supervision of the State Tax Commission; as this idea is developed and implemented, a special designation for education attainment regarding mass appraisal could be established. Neither of the bills came to fruition in the 2006 legislative session; however, the committee echoes its support of this provision, possibly for legislation in 2007.

4. Transparency in Rollback Laws

Another part of SB 1140 and HB 1996 was a provision that required political subdivisions to publish how much more revenue they would receive as a result of the recommended tax rate both as a percentage and dollar value in comparison with the previous fiscal year. Political subdivisions are already required to publish “the assessed valuation by category of real, personal and other tangible property in the political subdivision for the fiscal year for which the tax is to be levied as provided by subsection 3 of section 137.245, RSMo, the assessed valuation by category of real, personal and other tangible property in the political subdivision for the preceding taxable year, for each rate to be levied the amount of revenue required to be provided from the property tax as set forth in the annual budget adopted as provided by this chapter, and the tax rates proposed to be set for the various purposes of taxation.”⁵⁴ This provision is intended to

provide more information to taxpayers, ensuring that they have the information necessary to make informed decisions about the operations of their respective political subdivisions.

5. Joint Committee on Tax Policy and the Reviewing of Ratio Studies

While reviewing ratio studies is within the current scope of the Joint Committee on Tax Policy, it is not specifically mentioned. Another provision of SB 1140 and HB 1996 was to have the Joint Committee on Tax Policy study the ratio studies published by the State Tax Commission. With term limits it is important that the reviewing of ratio studies becomes a permanent responsibility of the committee. Ratio studies are the tools used by the State Tax Commission to equalize assessments both at an intracounty level and an intercounty level. They provide a wealth of information that enables the STC to target specific problem areas in counties. It is important for the committee to continually study this assessment tool to not only gain a better understanding of the assessment process, but also to develop an understanding of the legislative, budgetary, and regulatory needs of both the State Tax Commission and of assessors throughout the state.

6. Agricultural Use-Values

The committee will track the progress of the new methodology to be created by the State Tax Commission and the UM-Columbia Department of Agricultural Economics. Also, the committee recommends that the State Tax Commission include a report along with their promulgation of agricultural use-values which includes a summary of the testimony heard, the information they have received regarding agricultural use-values as well as the reasoning behind their recommendation. The committee will also examine section 137.021 RSMo and make recommendations regarding the statute to the General Assembly.

7. Outdated Statutes

The committee will work with the State Tax Commission to make recommendations to the General Assembly for the 2007 legislative session regarding the outdated language in the statutes relating to property assessment and taxation.

8. Standard Appraisal System

One of the provisions of SB 1140 and HB 1996 called for assessors to implement a standardized appraisal system across the state; certain exemptions would be granted for those counties that have a system which exceed the qualifications imposed by the provision. A statewide standardized appraisal system would allow the STC to aid counties with technical assistance. Currently, counties throughout Missouri use nine different cost appraisal systems; essentially, this means that the State Tax Commission must develop an expertise of the nine different appraisal systems and be able assist counties as well as ensure that properties are assessed according to their true value in money (market value) as required by the Missouri Constitution. A state-wide standardized appraisal system would ensure uniformity in the assessment process as well as save the time and resources of the State Tax Commission.

9. Statistical Analyst

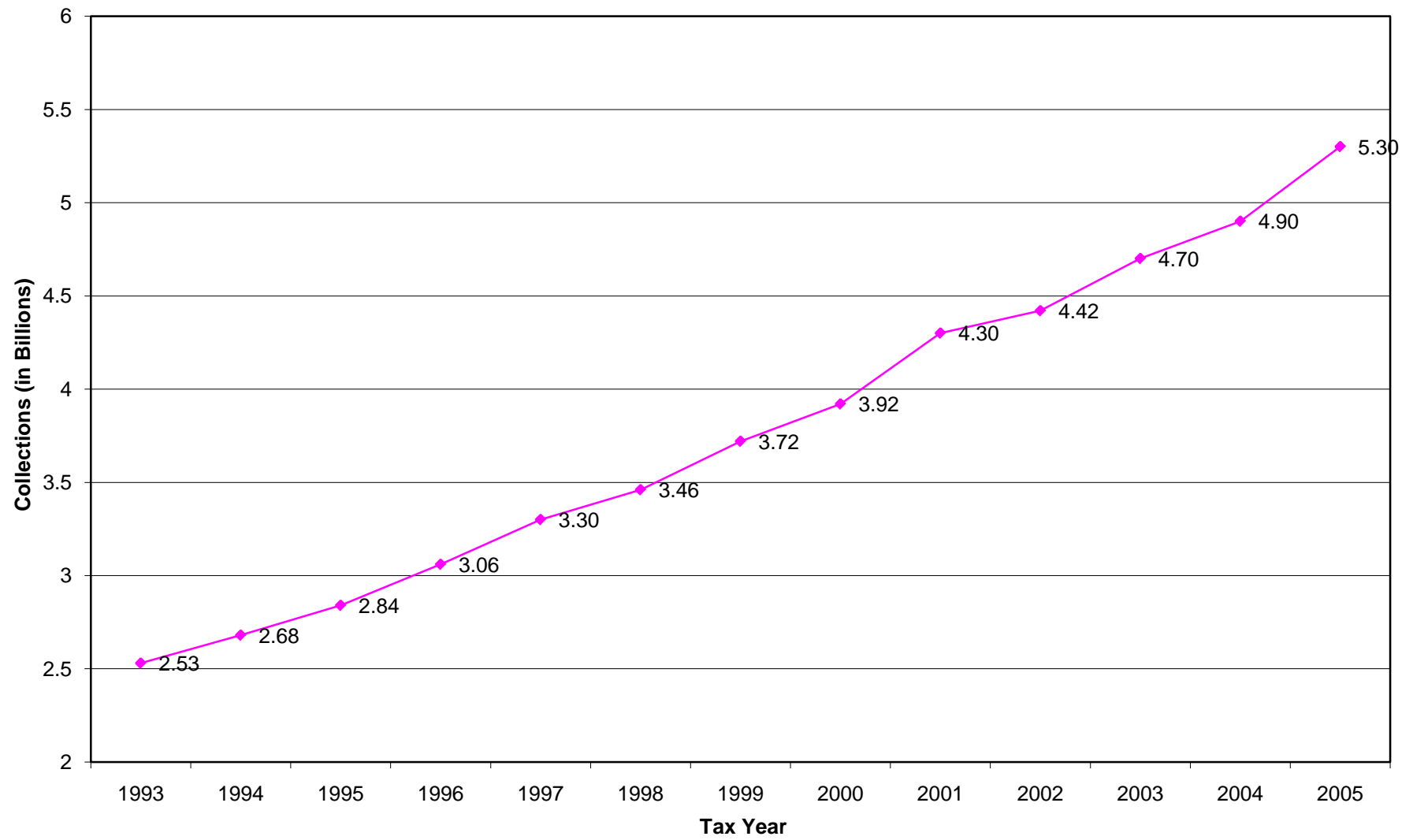
Following the testimony regarding ratio studies and statistical analysis provided by the State Tax Commission as well as the testimony which recommended a statistician for the STC, the committee recommends that the STC hire a statistics analyst to assist in the development of the ratio studies conducted by the STC. The FY 2007 budget includes an appropriation of \$40,000 for the position.

Notes

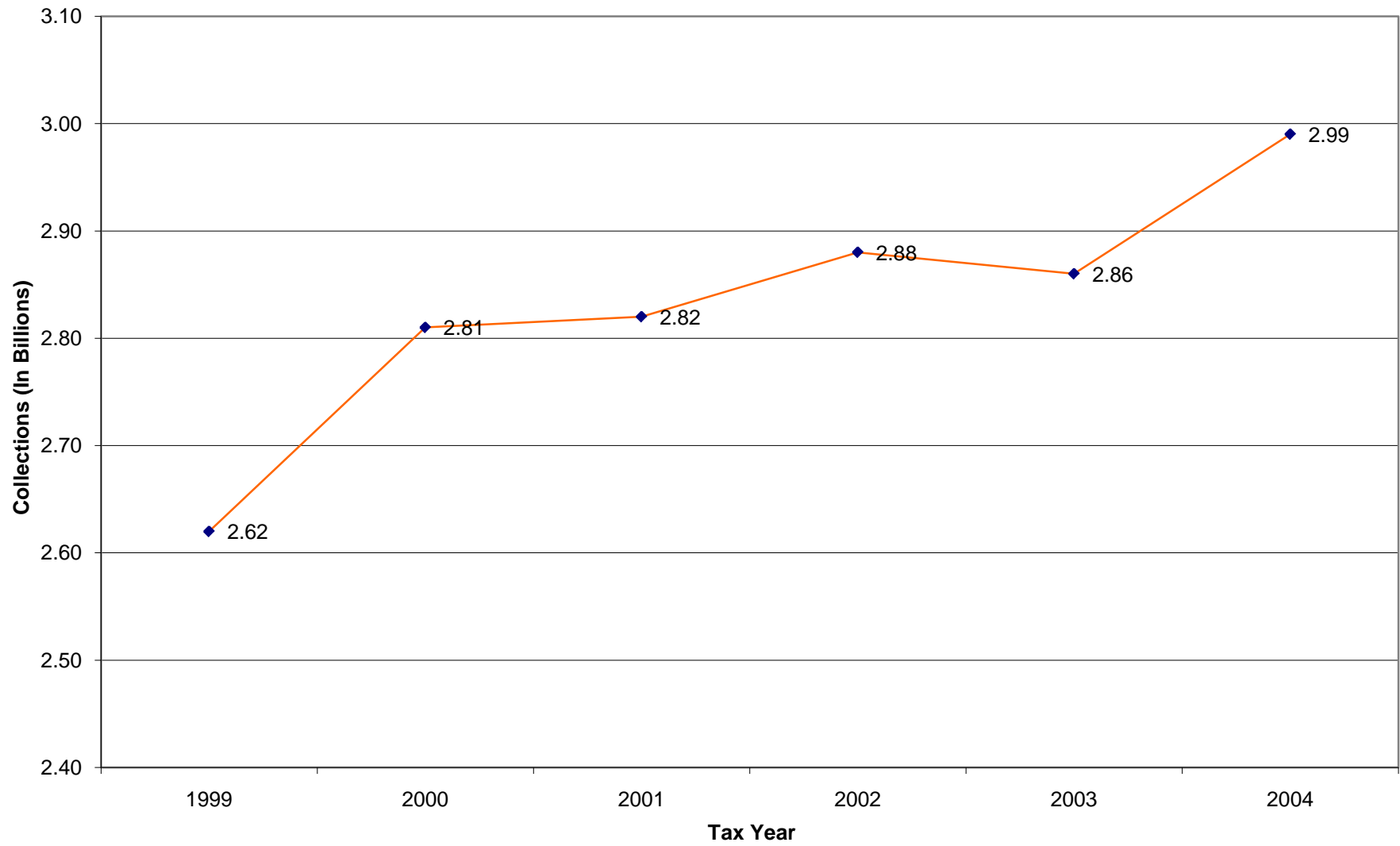
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- ¹ The State Tax Commission provided this information in their July 2005 testimony.
- ² RSMo Sections 137.016, 137.017.
- ³ RSMo Section 137.115 subsection 5
- ⁴ Taken from the State Tax Commission's *Property Reassessment and Taxation* guide.
- ⁵ Information provided by the State Tax Commission's *Property Reassessment and Taxation* guide.
- ⁶ Missouri Constitution, Article X, Section 22
- ⁷ The STC's *Property Reassessment and Taxation* guide and 12 CSR 30-3.005 provided this information.
- ⁸ RSMo Sections 137.115, 137.750.
- ⁹ RSMo Section 138.410
- ¹⁰ STC testimony on July 14, 2005 provided this information.
- ¹¹ Information obtained from the STC's *Property Reassessment and Taxation* guide and RSMo Section 137.106.
- ¹² An outline of all the testimony regarding property assessment and taxation is included in the appendix as Appendix I.
- ¹³ Testimony in favor of increasing the amount of sales data came from the State Tax Commission, the Missouri State Assessors Association, Steve Gardner of the Public Policy Research Center at UMSL, Sandy Rothschild of the Missouri Growth Association, and Ed Bushmeyer- Assessor of the City of St. Louis.
- ¹⁴ Steve Gardner provided this suggestion in his December 5, 2005 testimony.
- ¹⁵ This problem was reported by the Missouri Assessors Association and Steve Gardner of the Public Policy Research Center at UMSL.
- ¹⁶ Steve Gardner solely suggested this idea.
- ¹⁷ This information was obtained from the STC's July 2005 written testimony
- ¹⁸ Sandy Rothschild and Steve Gardner discussed this problem in their testimony.
- ¹⁹ Taken from STC written testimony, July 2005.
- ²⁰ Information regarding ratio studies came from State Tax Commission testimony on July 14, 2005.
- ²¹ This problem is noted by Steve Gardner as well.
- ²² Testimony in support of this statement came from Steve Gardner of the Public Policy Research Center at UMSL.
- ²³ Testimony came from the Missouri State Assessors Association and Chris Straub of the Missouri School Boards Association.
- ²⁴ The Missouri State Assessors Association and Steve Gardner supported these suggestions.
- ²⁵ These specific recommendations came from Steve Gardner of the Public Policy Research Center at UMSL, and were echoed by Sandy Rothschild.
- ²⁶ Steve Gardner and Sandy Rothschild proposed these recommendations respectively.
- ²⁷ This litigation problem was discussed by both the STC and Sandy Rothschild, while the suggestion was Sandy Rothschild's alone.
- ²⁸ All of the testimony in this section was provided by Sandy Rothschild of the Missouri Growth Association.
- ²⁹ The Missouri State Assessors Association provided support for this idea.
- ³⁰ Sandy Rothschild offered this suggestion.
- ³¹ Steve Gardner made this suggestion in his December 5, 2005 testimony.
- ³² Testimony regarding rollbacks was provided by Steve Gardner. The idea of enforcing rollback laws to offset increases in assessments was presented in written testimony in December by the Missouri State Assessors Association.
- ³³ The memo, written by Senate Staff Attorney, Jason Zamkus, focused specifically on the interpretation of the rollback laws. A copy of this memo is included in the appendix as Appendix C.
- ³⁴ Otto Fajen of the Missouri National Education Association supported this idea.
- ³⁵ Liz Walker of Kirkwood Public Library provided this suggestion.

-
- ³⁶ Chris Straub recommended this idea.
- ³⁷ Steve Gardner suggested this recommendation in his December 5, 2005 testimony.
- ³⁸ JoAnn Rudroft provided this recommendation.
- ³⁹ Property owner Ronald E. Levy provided this testimony.
- ⁴⁰ Carl Sandstedt of St. Charles City-County Library District provided this testimony.
- ⁴¹ The Missouri State Assessors Association provided this testimony.
- ⁴² The Missouri State Assessors Association testified in favor of this idea.
- ⁴³ Ed Bushmeyer, the assessor of the city of St. Louis, provided this testimony.
- ⁴⁴ Steve Gardner suggested this idea on December 5.
- ⁴⁵ This suggestion was provided by Steve Gardner.
- ⁴⁶ Steve Gardner provided this suggestion.
- ⁴⁷ Robert Kocer and Robert Ehler presented this idea.
- ⁴⁸ Moore, Kevin C. *Updating Use-Values of Missouri Agricultural Land and Developing and Testing an Alternative Methodology for This Procedure*. October, 1996. p. 3.
- ⁴⁹ A copy of the 1996 UM- Columbia Agricultural Use-Values report is included as Appendix D as well as a copy of the 2005 UM- Columbia Agricultural Use- Values report which is Appendix E.
- ⁵⁰ Full details of the alternative (current) method can be found on page 6 of the 1996 report.
- ⁵¹ A copy of this report, the FAPRI Report from December 2005, is also included in the appendix as Appendix G.
- ⁵² This information was gathered from Section 137.021 RSMo. A copy of this statute is also included in the appendix as Appendix H.
- ⁵³ I.A.A.O. *Standard on Ratio Studies*, 2005. p.2.
- ⁵⁴ Section 67.110, Subsection 2 of Missouri Revised Statutes

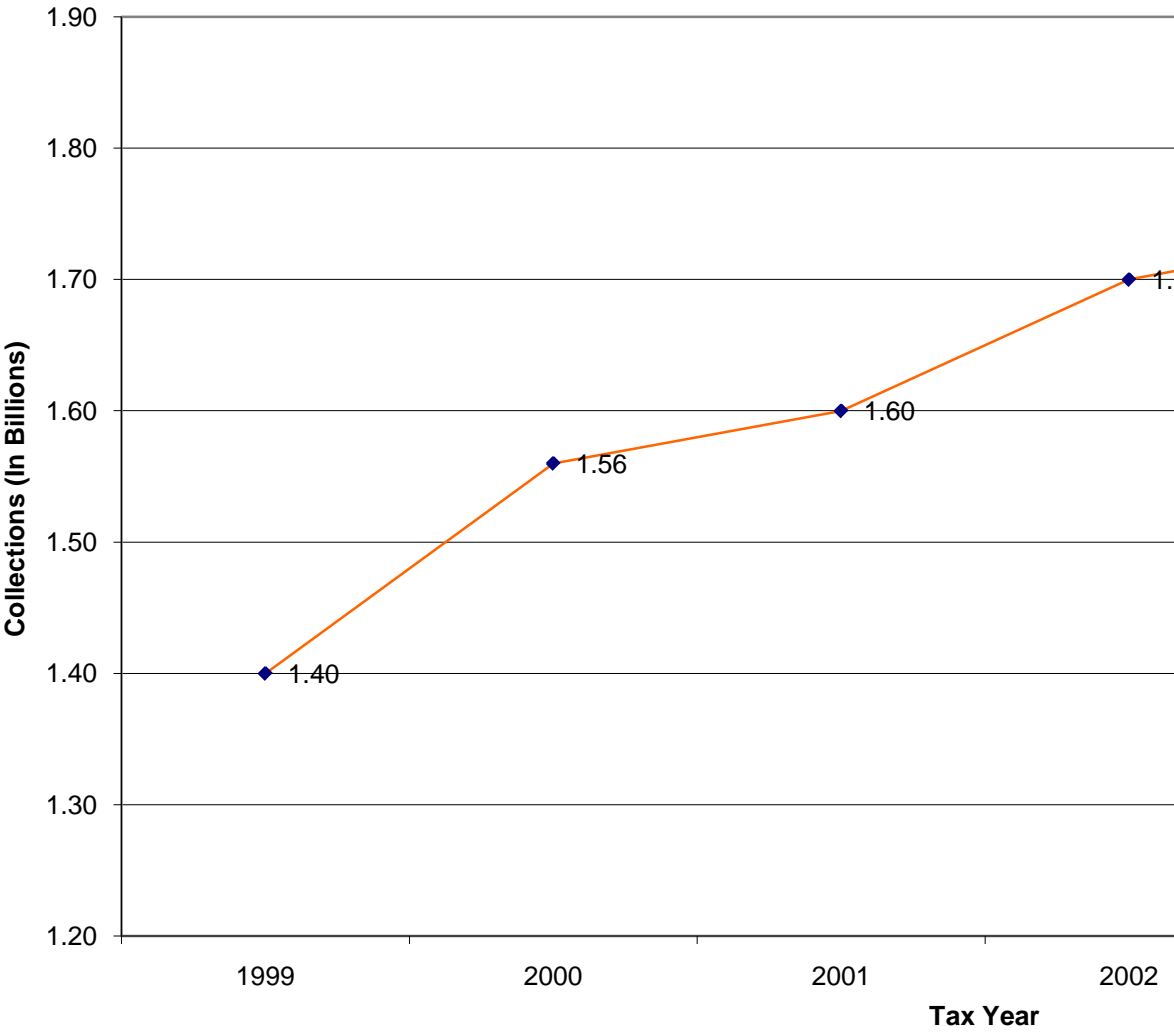
Property Tax Collections

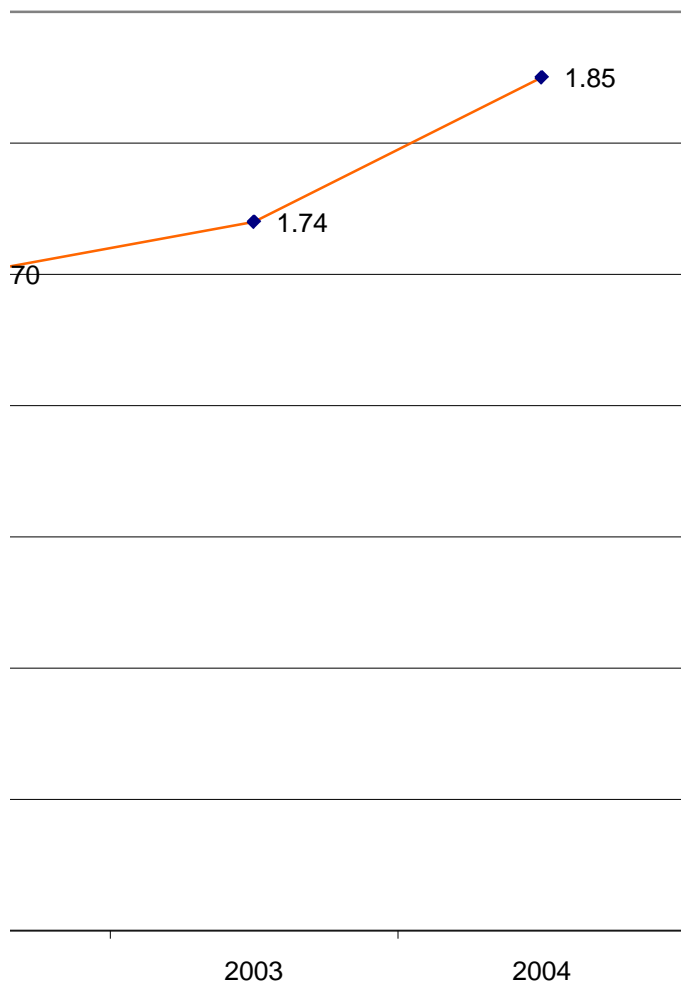


Sales Tax Collections

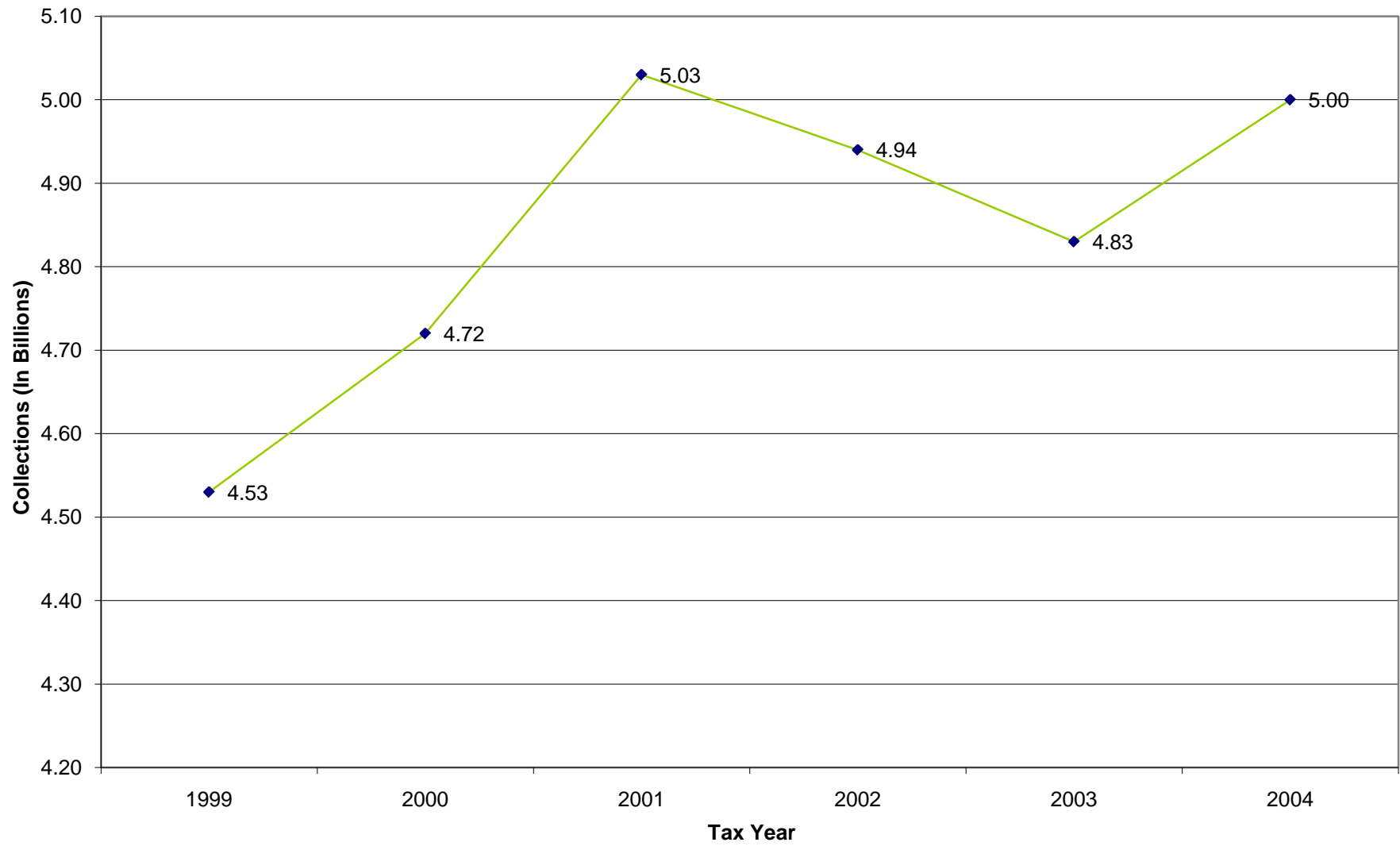


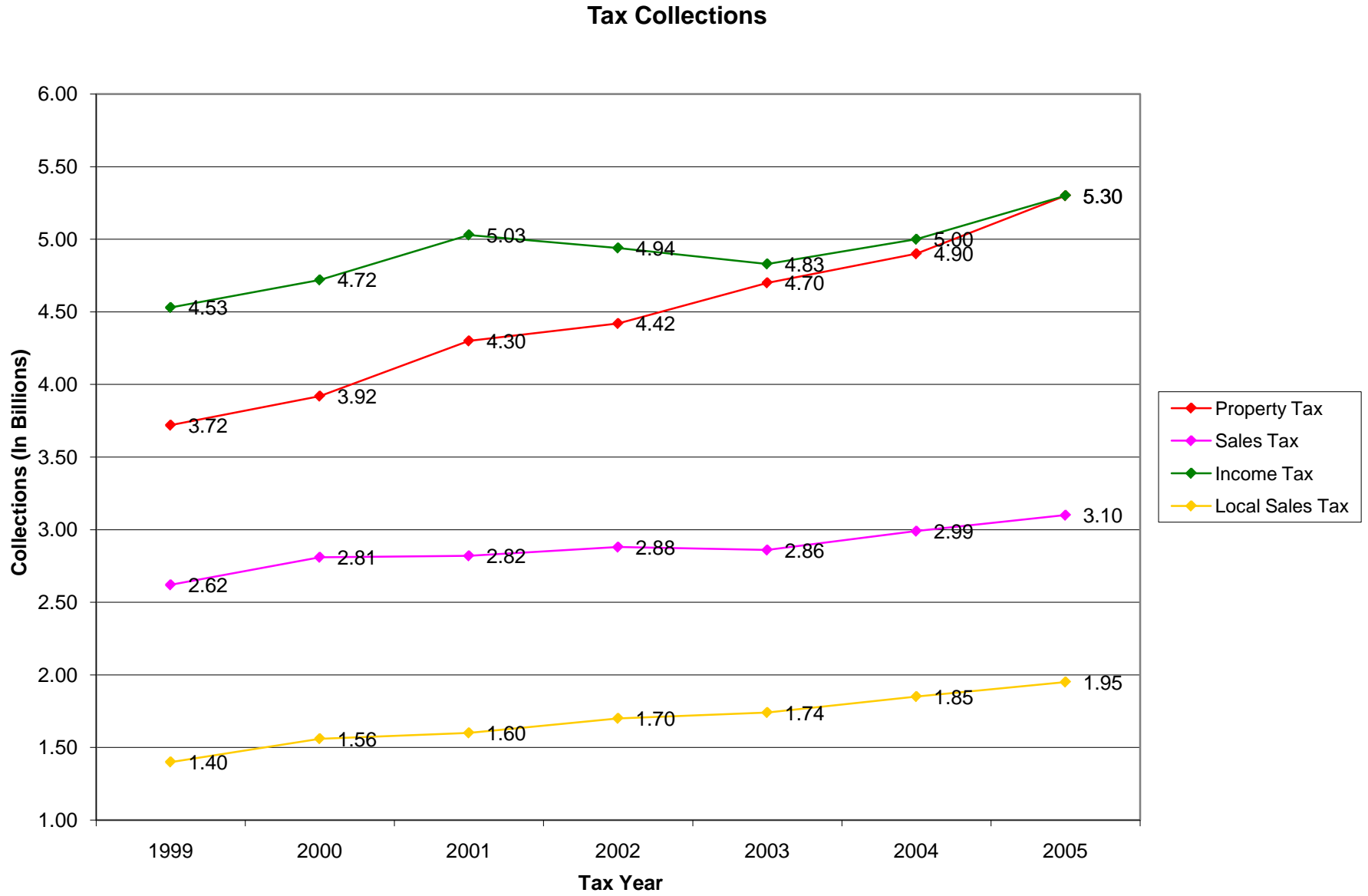
Local Sales Tax Collections





Income Tax Collections





Property Tax Collections

1993	2.53
1994	2.68
1995	2.84
1996	3.06
1997	3.30
1998	3.46
1999	3.72
2000	3.92
2001	4.30
2002	4.42
2003	4.70
2004	4.90
2005	5.30

Sales Tax Collection

1999	2.62
2000	2.81
2001	2.82
2002	2.88
2003	2.86
2004	2.99
2005	3.10

Income Tax

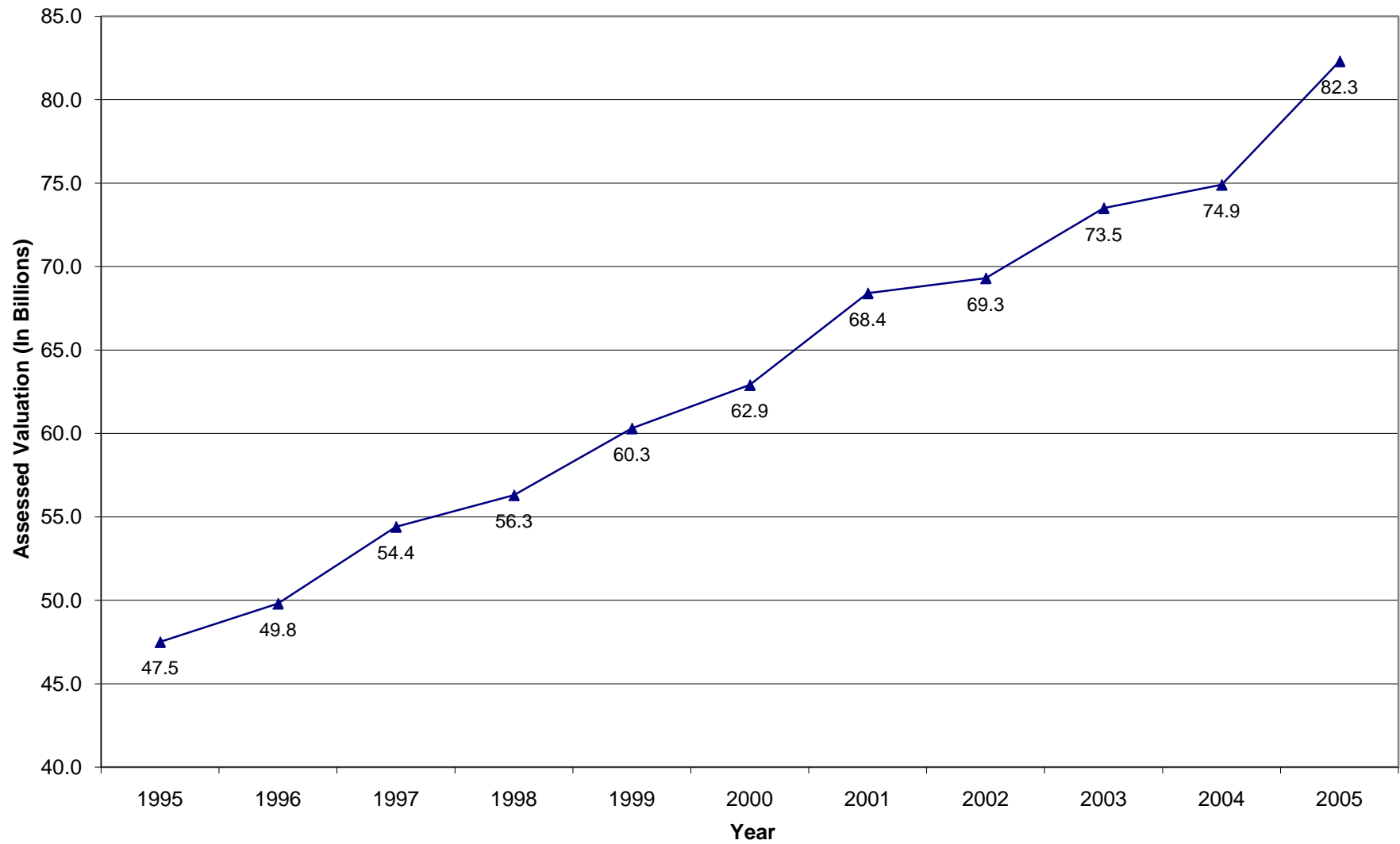
1999
2000
2001
2002
2003
2004
2005

κ Collections

Local Sales Tax Collections

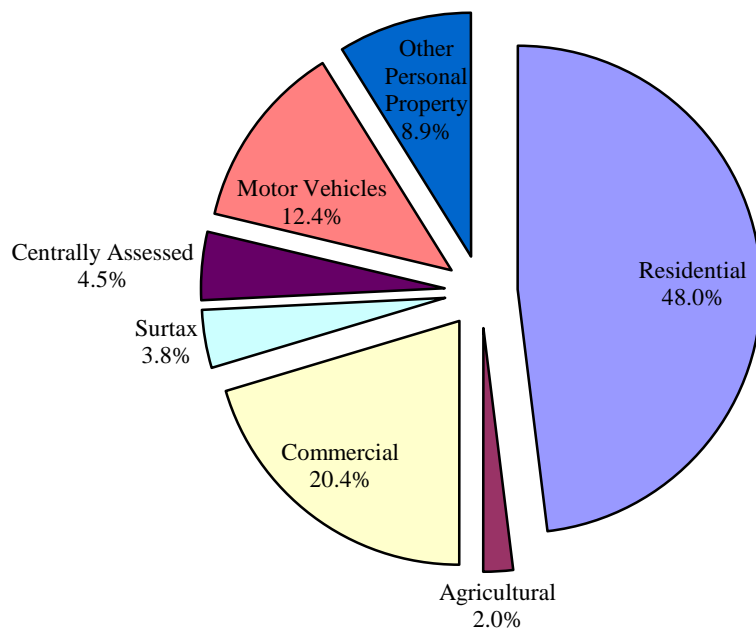
4.53	1999	1.40
4.72	2000	1.56
5.03	2001	1.60
4.94	2002	1.70
4.83	2003	1.74
5.00	2004	1.85
5.30	2005	1.95

Assessed Valuation History

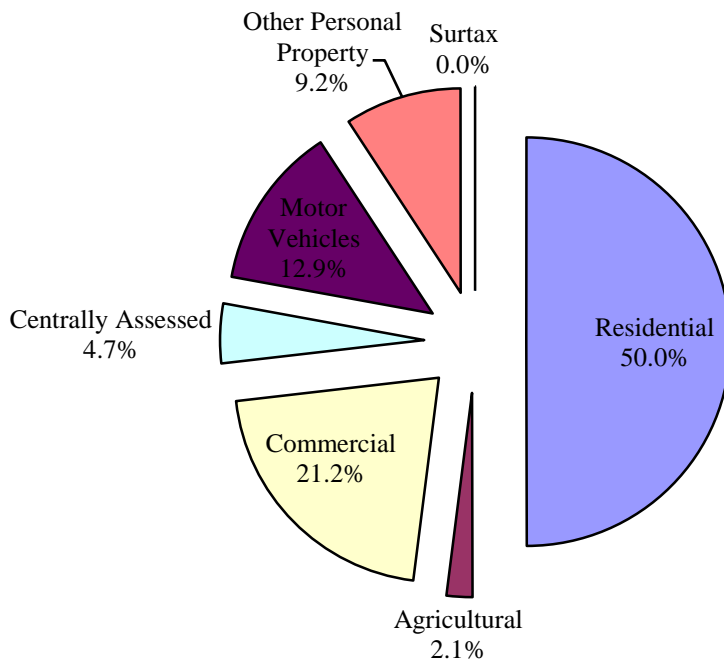


1995	47.5
1996	49.8
1997	54.4
1998	56.3
1999	60.3
2000	62.9
2001	68.4
2002	69.3
2003	73.5
2004	74.9
2005	82.3

WHO PAID THE 2004 PROPERTY TAX?
Estimated Taxes Paid \$4,915,746,575



2004 ASSESSED VALUATIONS
Total Assessed Value \$74,856,934,354



Assessed Values

Residential	49.95%	37,391,815,721
Agricultural	2.06%	1,543,436,395
Commercial	21.17%	15,846,149,716
Centrally Assessed	4.70%	3,520,950,550
Motor Vehicles	12.90%	9,652,419,014
Other Personal Property	9.22%	6,902,162,958
Surtax	0.00%	
	100.0%	74,856,934,354

Property Tax Collected

Residential	48.0%	2,361,196,442
Agricultural	2.0%	97,464,016
Commercial	20.4%	1,000,643,366
Surtax	3.8%	188,724,801
Centrally Assessed	4.5%	222,338,920
Motor Vehicles	12.4%	609,525,293
Other Personal Property	8.9%	435,853,737
	100.0%	4,915,746,575

STATE TAX COMMISSION

RATIO STUDY

Scope/Purpose

- The ratio study is the primary tool to measure the accuracy of assessments and the accuracy of the appraisal process. The study should evaluate the level of assessments and the uniformity of assessments in a particular jurisdiction.
- Uses
 1. Equalization of values
 2. Evaluation of the level & uniformity of assessments
 3. Identification of appraisal priorities
 4. Determination of whether administrative & statutory standards have been realized

What Constitutes a Ratio?

A ratio is the relationship between an assessed value as identified in the assessment rolls and the fair market value of the parcel as determined by an appraisal. The ratio utilized in the study is developed by dividing the assessed valuation by the fair market value.

Example:

<u>Parcel #</u>	<u>Assessed Valuation</u>	<u>Appraised (Market) Value</u>	<u>Ratio</u>
1	\$19,000	\$100,000	19.0%
2	16,000	90,000	17.8%
3	10,000	50,000	20.0%

NOTE: Statutory level for the residential subclass is 19%.

STATE TAX COMMISSION RATIO PROCEDURES

- Sampling
- Appraisals – Determining Market Value
- Appraisal Audit
- Statistical Analysis
- Evaluation

RATIO PROCEDURES SAMPLING

- Computer generated random sampling
- Statistically emulating the population
- Statistically valid sample sizes

RATIO PROCEDURES APPRAISALS

- Compliant with USPAP
- Cost Approach to Value
- Market Approach to Value
- Sample Appraisal Report Attached

RATIO PROCEDURES STATISTICAL ANALYSIS

- Evaluating Levels of Assessment

 - Mean

 - Median

 - Weighted Mean

 - Confidence Intervals

- Measures of Variability

 - Coefficient of Dispersion

 - Price Related Differential

 - Standard Deviation

STATISTICAL ANALYSIS

Evaluating Levels of Assessment

- Mean – Arithmetic Average

<u>Parcel No.</u>	<u>Assessed Value</u>	<u>Appraised Value</u>	<u>Ratio</u>
1	\$ 3,840	\$ 22,300	17.2197
2	100	500	20.0000
3	5,720	31,800	17.9874
4	3,230	17,400	18.5632
5	11,540	59,100	<u>19.5262</u>
			93.2965

Mean Ratio = Total of Ratios / Number of Samples

Mean Ratio = 93.2965 / 5

Mean Ratio = 18.6593

STATISTICAL ANALYSIS

Evaluating Levels of Assessment

- Median – Measure of central tendency which is the midpoint in the distribution of ratios

<u>Parcel No.</u>	<u>Assessed Value</u>	<u>Appraised Value</u>	<u>Ratio</u>	<u>Ranking</u>
1	\$ 3,840	\$ 22,300	17.2197	1
3	5,720	31,800	17.9874	2
4	3,230	17,400	18.5632	3
5	11,540	59,100	19.5262	4
2	100	500	20.0000	5

Median Ratio Ranking = (Number of Samples + 1) / 2

Median Ratio Ranking = (5 + 1) / 2

Median Ratio Ranking = 3

Median = 18.5632

STATISTICAL ANALYSIS

Evaluating Levels of Assessment

- Weighted Ratio – measure of central tendency that reflects the relationship of the total assessed value to the total market value

<u>Parcel No.</u>	<u>Assessed Value</u>	<u>Appraised Value</u>	<u>Ratio</u>
1	\$ 3,840	\$ 22,300	17.2197
2	100	500	20.0000
3	5,720	31,800	17.9874
4	3,230	17,400	18.5632
5	<u>11,540</u>	<u>59,100</u>	19.5262
	\$24,430	\$131,100	

Weighted Ratio = Total Assessed / Total Appraised

Weighted Ratio = \$24,430 / \$131,100

Weighted Ratio = 18.6346

STATISTICAL ANALYSIS

Evaluating Levels of Assessment

Confidence Intervals

- The State Tax Commission uses confidence intervals that are calculated for the mean, median and weighted mean ratios.
- The confidence intervals are calculated at the 95% and 99% level of confidence. This equates to an indication that the true population mean, median and weighted mean would fall within the confidence interval range 95% or 99% of the time.
- The State Tax Commission predominately uses the 95% confidence interval around the median to determine the range for measures of assessment level and central tendency.

STATISTICAL ANALYSIS

Measures of Variability

- Coefficient of Dispersion – COD indicates a percentage relationship by which various individual ratios differ from the measure of central tendency which is the median. The higher the COD, the more variability exists in the assessment process.

<u>Parcel No.</u>	<u>Ratio</u>	<u>Median</u>	<u>Absolute Deviation</u>
1	17.2197	18.5632	1.3435
2	20.0000	18.5632	1.4368
3	17.9874	18.5632	.5758
4	18.5632	18.5632	0.0000
5	19.5262	18.5632	<u>.9630</u>
			4.3191

Average Absolute Deviation is $4.3191 / 5 = .86382$

Coefficient of Dispersion = (Average Deviation / Median) X 100

Coefficient of Dispersion = $(.86382 / 18.5632) \times 100$

Coefficient of Dispersion = 4.6534

STATISTICAL ANALYSIS

Price Related Differential

- Price Related Differential – PRD is an index statistic for measuring vertical equity and will reflect whether or not regressivity or progressivity is evident in the assessment process. The PRD is an indication of the degree to which high valued properties are over-assessed or under-assessed relative to lower valued properties.

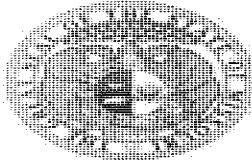
$$\text{PRD} = (\text{Mean Ratio} / \text{Weighted Ratio}) \times 100$$

$$\text{PRD} = (18.6593 / 18.6346) \times 100$$

$$\text{PRD} = 1.0013 \times 100$$

$$\text{PRD} = 100.13$$

Sample County



State Tax Commission of Missouri
P.O. Box 146, Jefferson City, MO 65102-0146
573.751.2414
email: stc@stc.mo.gov

Statistical Report

#68 - Moniteau County
2005 - 2006 Assessment Cycle

Tentative Ratio Study
Residential Subclass

Measures of Central Tendency

Mean Ratio.	17.63%
Median Ratio.	18.46%
Weighted Mean Ratio.	18.28%

Measures of Assessment Quality

Coefficient of Dispersion (about the median)	22.87%
Standard Deviation	5.40%
Coefficient of Variation	30.63%
Price Related Differential	96.44%

Assessment and Sample Data

Number of Assessments.	5,626
Number of Parcels Sampled.	34
Standard Error of Mean Ratio	0.93%

Measures of Precision

Confidence Intervals for Mean Ratio

95% - Low Ratio	15.82%
95% - High Ratio.	19.45%
99% - Low Ratio	15.24%
99% - High Ratio.	20.02%

Confidence Intervals for Median Ratio

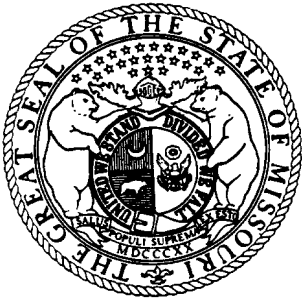
95% - Low Ratio	15.31%
95% - High Ratio.	20.00%
99% - Low Ratio	13.89%
99% - High Ratio.	21.40%

Confidence Intervals for Weighted Mean Ratio

95% - Low Ratio	16.90%
95% - High Ratio.	19.67%
99% - Low Ratio	16.46%
99% - High Ratio.	20.11%

Sample Size Estimates

Mean Ratio	
95% @ 3% Precision	12
95% @ 5% Precision	4
Weighted Ratio	
95% @ 3% Precision	7
95% @ 5% Precision	3



MISSOURI SENATE

DIVISION OF RESEARCH

State Capitol, Room B-9, Jefferson City, MO 65101

TEL. (573) 751-4666 FAX (573) 751-4778

H:\JASON\Gibbons\memos\property tax rollback memo

TO: Senator Gibbons

FROM: Jason Zamkus, Attorney

DATE: August 15, 2005

RE: Property tax rollbacks

Per your request, the following is a brief discussion of the constitutional and statutory requirements for rolling back property tax rates.

Article X, section 22 of the Missouri Constitution states, "if the assessed valuation of property as finally equalized, excluding the value of new construction and improvements, increases by a larger percentage than the increase in the general price level from the previous year, the maximum authorized current levy applied thereto in each county or other political subdivision shall be reduced to yield the same gross revenue from existing property, adjusted for changes in the general price level, as could have been collected at the existing authorized levy on the prior assessed value." Basically, if the assessed value of property within a political subdivision increases by an amount greater than the increase in the general price level, exclusive of new construction and improvements, the political subdivision must roll back property tax rates, adjusted for changes in the general price level in order to maintain revenue neutrality.

Section 137.073, RSMo, requires, "when changes in assessed valuation are entered in the assessor's books, all political subdivisions shall immediately revise the applicable rates of levy for each purpose for each subclass of real property, individually, and personal property in the aggregate, for which taxes are levied to the extent necessary to produce from all taxable property, exclusive of new construction and

improvements, substantially the same amount of tax revenue as was produced in the previous year for each subclass of real property, individually, and personal property in the aggregate, except that the rate may not exceed the greater of the rate in effect in the 1984 tax year or the most recent voter-approved rate."

As provided in Article X, section 22 of the Missouri Constitution, a political subdivision may revise each property tax levy to allow for inflationary assessment growth occurring within the political subdivision. However, the inflationary growth factor for any subclass of real or personal property is limited to the actual assessment growth in such subclass, exclusive of new construction and improvements, and exclusive of the assessed value of any real property which was assessed by the assessor of a county or city in the current year in a different subclass of real property, but not to exceed the consumer price index or five percent, whichever is lower.

In summary, when there is an increase in assessed valuation in excess of the general price level, a political subdivision must roll back property tax rates to maintain revenue neutrality while still allowing for inflationary growth, but such growth is limited to the lower of the increase in the consumer price index or five percent.

It may also be of some interest that under subsection 8 of section 137.073, RSMo, Missouri law specifically grants taxpayer standing where a taxpayer has cause to believe that a taxing authority has not complied with the provisions of section 137, RSMo. In such a case, a taxpayer may make a formal complaint with the prosecuting attorney of the county. Should the prosecuting attorney fail to bring action within ten days of the filing of the complaint, the taxpayer may bring a civil action pursuant to section 137.073, RSMo, and institute an action as a representative of a class of taxpayers within a taxing jurisdiction. In addition to the relief requested in such a class action suit, the court shall assess against a taxing authority found to be in violation of section 137.073, RSMo, the reasonable costs of bringing the action, including reasonable attorney's fees.

Please do not hesitate to contact me if you feel I may be of further assistance.

**UPDATING USE-VALUES OF MISSOURI
AGRICULTURAL LAND
AND DEVELOPING AND TESTING AN ALTERNATIVE
METHODOLOGY FOR THIS PROCEDURE**

Final Report
Presented to the
State Tax Commission of Missouri
Van Donley, Chairman
October, 1996

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This report, concerning updated use-values for Missouri agricultural land, contains three sections: 1. Net returns and use-value estimates for each land grade in the agricultural land classification system for use-value assessments. 2. A brief evaluation of the present Missouri State Tax Commission system for use-value assessments, with special emphasis on recommended future changes. 3. A description and examples of a proposed alternative methodology for calculating use-value updates, along with a discussion of the pro's and con's of the proposed alternative.

1. Net Returns and Use-Value Estimates

Using the most recent available data, net returns and use-values were estimated for the eight soil grade classifications. Table 1 shows the resulting net return per acre and corresponding 1995 use-value for the eight soil grades. Use-values were calculated using supported and unsupported prices. Table 2 presents the trends in use-values from 1989 to the present. Unsupported 1995 use-values are just slightly above 1993 levels for the top two soil grades, but are at or below 1993 levels for the remaining land classes. Supported 1995 use-values follow the same pattern in relationship to 1993 supported price use-values. Soil grade 8 ended up with a negative use-value as a result of negative net returns. USDA estimates of agricultural land values show significantly larger gains in value, coming in at 13.7 % increase from 1993 to 1995.

TABLE 1

1995 USE-VALUE UPDATES

<u>SOIL GRADE</u>	<u>ASSUMED PI MIDPOINT</u>	<u>NORMAL NET RETURN PER ACRE¹</u>	<u>SUPPORTED NET RETURN PER ACRE²</u>	<u>NORMAL VALUE/ACRE³</u>	<u>SUPPORTED VALUE/ACRE⁴</u>
1	96.5	\$ 95.16	\$113.05	\$1013.96	\$1204.58
2	89.0	\$ 77.13	\$ 93.63	\$ 821.84	\$ 997.66
3	80.5	\$ 56.70	\$ 71.62	\$ 604.16	\$ 763.13
4	70.5	\$ 32.66	\$ 45.73	\$ 348.00	\$ 487.27
5	60.5	\$ 18.33	\$ 19.83	\$ 195.31	\$ 211.29
6	47.5	\$ 13.86	\$ 13.86	\$ 147.68	\$ 147.68
7	27.0	\$ 6.80	\$ 6.80	\$ 72.46	\$ 72.46
8	7.0	\$(0.09)	\$(0.09)	\$ (0.96)	\$ (0.96)

¹ USES UNSUPPORTED PRICES

² USES SUPPORTED PRICES

³ UNSUPPORTED VALUE PER ACRE AT .09385 CAPITALIZATION RATE

⁴ SUPPORTED VALUE PER ACRE AT .09385 CAPITALIZATION RATE

TABLE 2**TRENDS IN PER ACRE USE-VALUES (1989-95)**

SOIL GRADE	<u>1989</u> ¹	<u>1989</u> ²	<u>1991</u> ¹	<u>1991</u> ²	<u>1993</u> ¹	<u>1993</u> ²	<u>1995</u> ¹	<u>1995</u> ²
1	814	1028	807	1067	983	1166	1013	1205
2	673	870	662	901	810	978	822	998
3	512	691	496	713	614	766	604	763
4	324	480	302	491	383	516	348	487
5	182	269	183	270	194	266	195	211
6	140	140	141	141	148	148	148	148
7	75	75	74	74	77	77	72	72
8	11	11	9	9	7	7	(1)	(1)

¹ UNSUPPORTED VALUE

² SUPPORTED VALUE

The values presented here reflect the following updates from the 1993 figures:

1. Crop Rotational Percentages: the rotational percentages for weighting the final net return equations reflect the most current rotations found in Missouri in 1995.

2. State Average Yields: these have been updated using data on yields for the most recent 20 years (1976-95).

3. State Average Prices: prices have been updated using the period 1990-95, a six year average dropping the high and low. This is true for both supported and unsupported prices.

4. Machinery Prices: both list and purchase prices have been updated using an indexing system.

5. Input Prices: prices for seed, fertilizer, chemicals, fuels, interest, storage and wages have all been updated using an indexing system.

6. Pasture Revenue and Expenses: have all been updated including pasture lease price, as well as fencing, fertilizer, establishment, tax and miscellaneous costs.

7. Percent Crop Sales by Month: have been updated using a five year average for 1990/91 through 1994/95.

8. Capitalization Rate: has been updated to reflect a five- year average for 1991 through 1995 of the most common interest rate charged on long-term real estate loans by banks in the 10th (Kansas City) Federal Reserve District.

2. Evaluation of the Process and Areas of Concern Including Recommended Possible Changes

Overall, the process used to estimate use-values is sound. The real problems that arise are the assumptions that were developed in 1982 and held constant since then. Some of the assumptions are obviously not correct for the current time period. The question of whether or not to correct these assumptions is a difficult one. To update and correct these areas would be quite labor intensive. In many cases, the effects upon the final use-values would be very minor. Given that consistency in use-values over time is important, each of the following areas of concern must be evaluated in terms of the bottom-line effect on use-values versus the cost of updating.

1. Assumed statewide $PI=62.5$. The entire updating procedure hinges on this value being the "true" statewide PI . Effort in this area would make the updating much more accurate if this PI is incorrect or has changed since 1982. Factors affecting this value may include current participation in the conservation reserve program as well as small changes in soil productivity over time.

2. Technology Regression: the procedure to estimate technology effects on crop yields is the regression of yields on rainfall, temperature and a trend variable to capture technology effects in bushels per acre. The procedure itself is probably the best available, but needs to be updated to at least make sure that the hypothesized adjustments to yields are accurate.

3. Typical Machinery Operations: p.40-44, these are the assumed most typical implement sizes, horsepower and "times over" characteristics for Missouri farms in 1982. Research in this area could lead to better estimation of land values by taking into account trends in conservation tillage, more efficient machinery, etc., that have become more popular in recent years.

4. Fertilizer and lime build up and maintenance levels for the various soils used in the study have not changed since the initial study was done in 1982. While these are not expected to change much over time, one needs to keep in mind that a priori, there is an anticipated positive technology effect in bushels per acre from number 2. above. This leads one to believe that subtle changes in varieties that facilitate higher yields may be more or less dependent on the current build up and maintenance levels for nitrogen, phosphorus and potash.

5. Herbicides: the herbicide mixes and application rates used in the update are the same as that for the original study in 1982. Some research needs to be done in this area as trends toward conservation farming as well as consumer preferences over different chemicals evolve.

6. Insecticides: the same is true here as for number 5. above. As better pesticides arrive on the market and conservation practices become more prevalent, predominant insecticide use and rates of application should change over time.

7. Seeding rates used in the update for corn, soybeans, and wheat are the same as those

used for the 1982 report. As farming practices evolve over time (i.e. trend towards narrower rows for corn for example), this may need to be looked into. There are some basic assumptions listed in the original report with regard to percentages of land used in different types of planting practices (i.e. soybeans drilled or planted conventionally) that need to be checked.

8. The assumptions on grain stored (p. 55) while well documented and coming straight from Missouri Farm Facts, may need to be checked. Grain storage amounts are specified by month to capture interest costs associated with crop storage. If the basic assumptions are no longer plausible this could potentially alter interest expense during the year of the update.

9. Hauling charges for each of the three major commodities are not changed for the updating procedure. If more or less grain storage is becoming prevalent and/or different methods of transporting grain are evolving over time, this area needs to be researched in an effort to more accurately capture the costs associated with this portion of production.

10. The assumptions on where grain is stored (i.e. on or off farm) are another area that has not been changed since the initial study was done in 1982. Percentages of on and off farm storage for the three principle commodities are given and may need to be revised. Again, this is done in an effort to capture the interest costs associated with storing grain.

11. Management fees are estimated to be 8% of the landowners share of gross income. Consequently, management fees are assessed at 4% of gross returns because in 1982 average land was leased on a 50-50 crop share lease. Obviously, trends toward alternative leasing arrangements may influence this percentage and need to be evaluated if the updating is to be accurate. Other questions arise in that with more participation in the CRP, is the assumption of a 4% management fee valid for this particular land?

12. Labor hours for the various operations have remained the same since 1982. Wage rates have adjusted, but some attention to the amount of labor used per acre should be given, especially if the machinery sections of the program are changed.

13. Fixed machinery costs are calculated using the SAS statistical program and were developed when the first update was done. While the procedure for the estimation of these costs shouldn't change, the values derived are highly dependent on the type of machinery used on the typical Missouri farm. If these machinery types are altered in any way (as in number 3. above), the fixed costs will obviously change.

14. The method used to evaluate alternative ways to attain average crop prices for the three principle commodities is listed in the original report and at that time the method chosen gave the minimum amount of variation. Subsequent updates have all used the same method. Perhaps the best way to approach this problem would be to re-evaluate all of the ways to average prices when updating occurs and choose the appropriate method by means of the minimum variation criteria. This would insure that the method chosen gives the best estimate of crop prices.

15. When figuring the Net Returns to Pasture equation, returns and expenses are highly dependent on an equation derived and estimated by Jacobs (1981). This particular equation

states that AUM's are linearly related to the productivity index of a given soil. While the method seems appropriate, concerns do arise over whether or not the equation is still accurate 8 years after original implementation. If a better estimate is available, it should be used since this equation is pivotal in determining the "break" between which land is valued as cropland or pasture land. In addition, on the expense side, fertilizer costs are estimated by manipulating this equation since fertilizer levels are assumed to be related to PI. A weighting system is used to do this whereby it is assumed that 30% of all pasture land in Missouri is leased on a per AUM basis. Now the question becomes one of not only the accuracy of the hypothesized equation, but of the validity of the assumption of leasing arrangements to be used in the study.

The weighting scheme used to derive a rental value per AUM has resulted in a continual decline in the rental value, while the survey results which gave the original base value of \$6.00 per AUM now report an average of about \$7.00 per AUM.

16. Also on the expense side of the pasture equation is the estimate of annual property taxes which are stated to be linearly related to PI. This equation may need to be re-estimated if more accurate use-values are desired.

17. The previous discussion deals exclusively with the numerator of the formula for the capitalization of farming income into perpetuity. The denominator of that equation is much more critical in that small percentage changes, even down to one-hundredth of a percent, can alter estimates of land values drastically. More research in the attainment of the appropriate capitalization rate may be warranted.

Proposed “new” method for calculating updated use-values.

After much thought and trying several alternative “new” methods for calculating use-values of agricultural land, the following procedure is recommended as a superior but simpler method for the Tax Commission to adopt as the means by which use-values are updated. It follows much the same logic as the pasture portion of the existing procedure for updating use-values. Basically changes in crop land and pasture rental values are being suggested as “movers” of the previous net crop and pasture rents, and then these values are capitalized using the new adjusted capitalization rate (the same as under the current procedure) in order to arrive at updated use-values.

Specifically the procedure is as follows:

1. Using crop and pasture rental rates as published in Missouri Farm Facts, calculate the percentage change in each for the period in question. Crop rental rates are calculated using the most recent six years of data, dropping out the high and low and averaging the remaining four years. This follows from the procedure previously used to calculate average crop prices used in figuring net crop returns (i.e. a six-year moving average dropping the high and low). Pasture rental rates are calculated using the most recent five years of data, again following the procedure previously used for figuring average pasture rental rates.
2. Apply the rental rate percentage changes to the rates used previously for calculating use-values. Apply the crop land rental change to land classes 1-4, and the pasture rental changes to land classes 5-8.
3. Calculate the updated discount rate used to capitalize these rental rates into use-values. The capitalization rate used is the same as was used in the previous method. Specifically it is a five-year moving average of the “Most Common Interest Rate on Farm Loans - Long Term Real Estate Loans in the 10th (Kansas City) Federal Reserve District”, published in Agricultural Finance Databook, Division of Research and Statistics, Board of Governors of the Federal Reserve System. The quarterly rates are used to calculate a yearly average, and then the five most recent years are used to calculate the five-year average.
4. Calculate the updated use-values for each soil grade (i.e. land class) by dividing the updated rental value by the capitalization rate.

This procedure is illustrated below by calculating the 1995 use-values using the proposed alternative method.

1995 Use-Values as calculated by the proposed “new” procedure.

1995 crop rent ave. (6 most recent yrs take out high and low) = 52.779242

1993 crop rent ave. (6 most recent yrs take out high and low) = 51.461247

Percentage crop rent increase 1993 to 1995 = 2.56 %

1995 pasture rent ave. (5 most recent yrs) = 17.523288

1993 pasture rent ave. (5 most recent yrs) = 17.56822

Percentage pasture rent increase 1993 to 1995 = -.26122 %

1993 Unsupp. Net Crop Revenue	Times 1 plus % change	1995 Calculated Net Crop Revenue	5 yr. Ave. Capitaliz. Rate	1995 Use-Values by “new” method
\$100.90	1.0256	\$103.48304	.09385	\$1102.64
\$83.12	1.0256	\$85.247872	.09385	\$908.34
\$62.98	1.0256	\$64.592288	.09385	\$688.25
\$39.28	1.0256	\$40.285568	.09385	\$429.25
\$19.87	.9973878	\$19.818095	.09385	\$211.17
\$15.21	.9973878	\$15.170268	.09385	\$161.64
\$7.87	.9973878	\$7.8494419	.09385	\$83.64
\$0.71	.9973878	\$0.7081453	.09385	\$7.55

Use-Values and percentage changes using the “new” alternative procedure.

SOIL GRADE	1993 Unsp. Use-Val.	1995 “new” Use-Val.	Percentage Change
1	983	1103	12.2
2	810	908	12.1
3	614	688	12.1
4	383	429	12.0
5	194	211	8.8
6	148	162	9.5
7	77	84	9.1
8	7	8	14.2

Use-Values and percentage changes using the “old” (i.e. existing) procedure.

SOIL GRADE	1993 Unsp. Use-Val.	1995 Unsp. Use-Val.	Percentage Change
1	983	1013	3.0
2	810	822	1.5
3	614	604	(1.6)
4	383	348	(9.1)
5	194	195	0
6	148	148	0
7	77	72	(6.5)
8	7	(1)	N/A

USDA figures: 1993 Ave. Value Land and Buildings = \$774
 1995 Ave. Value Land and Buildings = \$880
 Percentage change in MO land values 1993 to 1995 = 13.7 %.

As a test, this alternative method was used to calculate 1993 use-values, in order to see how the procedure would have performed versus the existing method.

1993 crop rent ave. (6 most recent yrs take out high and low) = 51.461247

1991 crop rent ave. (6 most recent yrs take out high and low) = 49.059402

Percentage crop rent increase 1991 to 1993 = 4.89578 %

1993 pasture rent ave. (5 most recent yrs) = 17.56822

1991 pasture rent ave. (5 most recent yrs) = 16.939178

Percentage pasture rent increase 1991 to 1993 = 3.58056 %

1991 Unsupp. Net Crop Revenue	Times 1 plus % change	1993 Calculated Net Crop Revenue	5 yr. Ave. Capitaliz. Rate	1993 Use-Values by "new" method
\$90.27	1.0489578	\$94.68942	.1026	\$922.89
\$73.97	1.0489578	\$77.591408	.1026	\$756.25
\$55.50	1.0489578	\$58.217157	.1026	\$567.42
\$33.76	1.0489578	\$35.412815	.1026	\$345.15
\$20.51	1.0358056	\$21.244372	.1026	\$207.06
\$15.76	1.0358056	\$16.324296	.1026	\$159.11
\$8.27	1.0358056	\$8.5661123	.1026	\$83.49
\$0.96	1.0358056	\$9.943733	.1026	\$9.69

Use-Values and percentage changes if the “new” method had been used in 1993.

SOIL GRADE	1991 Unsp. Use-Val.	1993 “new” Use-Val.	Percentage Change
1	807	923	14.4
2	662	756	14.2
3	496	567	14.3
4	302	345	14.2
5	183	207	13.1
6	141	159	12.8
7	74	83	12.2
8	9	10	11.1

Use-Values and percentage changes from 1993 using the “old” procedure.

SOIL GRADE	1991 Unsp. Use-Val.	1993 Unsp. Use-Val.	Percentage Change
1	807	983	21.8
2	662	810	22.4
3	496	614	23.8
4	302	383	26.8
5	183	194	6.0
6	141	148	4.9
7	74	77	4.1
8	9	7	(22.2)

USDA figures: 1991 Ave. Value Land and Buildings = \$723
 1993 Ave. Value Land and Buildings = \$774
 Percentage change in MO land values 1991 to 1993 = 7.1 %.

Comments, conclusions and concerns about the new versus the old methods.

1. The proposed new method is much simpler and more easily defended against criticism than the old method. It does not rely on old technologies as the base line. But it does have to start from a beginning base line for rental values. The base line used is the net crop and pasture land returns estimated from the “old” procedure when the 1993 use-value updates were computed. As such, the old technologies are embodied in the base line used for the new procedure.
2. The proposed new methodology arrives at a more uniform percentage change for crop and pasture land use-values than did the old method. This is simply due to the way the percentage changes are used as “movers” across four soil grades. The old method can and does result in quite different percentage use-values changes across the soil grades. While one can envision situations where such differential changes could occur, in most cases rents and resulting use-values seem to move together across soil grades from year to year.
3. The proposed method results in use-value changes that are more consistent with the USDA figures for farm real estate value changes. While one would not expect the two series to move exactly together, some strong degree of relationship is foreseen. Certainly taxpayers and politicians would be looking at market values to some extent when predicting what they believe use-values would be doing.
4. The proposed method is designed to minimize any major movements in use-value changes from period to period. Using rental values, which are somewhat slow to adjust themselves, and then taking moving averages will tend to smooth out any major changes in net rental income values. The capitalization rate is typically the most dominant factor influencing use-value adjustments. The use of the five-year moving average tends to moderate this influence.
5. The proposed method is simple enough to be computed at any time, given adequate data. The Tax Commission could examine the changes annually, in order to educate assessors, politicians, etc. as to likely changes in the future. The procedure can easily be performed by staff members of the Tax Commission, eliminating the need to hire University of Missouri assistance.
6. 1995 weighted average crop rents as calculated under the new method using converted crop rents from Missouri Farm Facts, are about 8.6 % below the weighted average of 1995 unsupported crop land net returns as calculated by the old procedure. USDA just revised their survey on rental rates, which resulted in a significant decline in crop and pasture rental rates reported. One would have expected calculated net returns to be below rental rates, as fixed costs such as property taxes are deducted from rents to arrive at net crop and pasture returns. But while the absolute level of rents and/or net land returns can be argued, the changes in rents should give a very close approximation of changes in net land returns.

UPDATING USE-VALUES OF MISSOURI AGRICULTURAL LAND

Final Report
Presented to the
State Tax Commission of Missouri
Sam Leake, Chairman
October 2005

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This report contains updated use-values for agricultural land in Missouri. Data pertaining to calendar year 2004 (and more recent if possible) were obtained and used to compute the updated use-values. This included data on year 2005 cropland and pasture rental rates for Missouri, and historical (2004 and previous) long-term farm real estate loan interest rates for the Kansas City Federal Reserve District (for computing the capitalization rate). Rental rate changes are applied to the previous years net crop (or pasture) revenue figures, to represent movements in returns to farmland. These income figures are then capitalized into a use-value using a five-year average interest rate.

For the year 2005, U.S.D.A. Economic Research Service data show average Missouri cropland rental rates increasing to \$79.00 per acre, an increase of \$3.00 per acre above the 2004 amount. Pasture rental rates increased by \$1.00 per acre over the year 2004 level to stand at \$27.00 per acre. The procedure used to compute average net crop or pasture returns smoothes out some of the year-to-year fluctuations by taking long-term averages. Net return averages used to compute use-values rose by 5.32% for cropland (soil grades 1-4), while increasing by 6.09% for pastureland (soil grades 5-8) between 2004 and 2005. Interest rates bottomed out during early 2004 and rose slightly during the last three quarters in the year. The five-year moving average figure for interest rates (now for the years 2000 through 2004) decreased by .41 percentage points, falling from 8.245 to 7.835 percent due to lower interest rates in 2004 as opposed to 1999. The combination of higher long-term average net rents and a lower average capitalization rate resulted in use-value increases of 10.83% for cropland and 11.64% for pastureland.

While data for the market value of farmland and buildings do not correspond directly to use-value changes, we can look back at these figures as one source of comparison. U.S.D.A. figures put Jan. 1, 2005 average Missouri farm real estate (land and building) values at \$1,740 per acre, up from \$1,580 in 2004. This amounts to a percentage change between 2004 and 2005 of 10.1 percent. In 2001 the U.S.D.A. also began reporting crop and pasture land values. Missouri non-irrigated cropland was valued at \$1,850 per acre on Jan. 1, 2005, up from \$1,650 one year earlier, an increase of 12.1 percent. Pastureland values also increased, from \$1,130 up to \$1,260 per acre, an increase of 11.5 percent. Use-value changes for the same period range from about 10.8 percent for cropland to 11.6 percent for pastureland.

Calculated use-value changes do not always follow market value changes due to several factors. Use-values are calculated using an historical average of returns to land (i.e. rents) and interest rates. This process tends to slow or smooth the response of use-values to annual changes in these factors. This minimizes the effects of any one-year, and makes tax (and revenue) planning easier. But this can also lead to movements in use-values that do not appear consistent with the annual fluctuations in market values for land. Market values tend to react faster to changes in returns to land and interest rates. Market values continue to rise, in part due to non-agricultural use demand. Use-values are not intended to measure sales or actual market prices, but only to represent the agricultural productivity value of the land. Use-values change as net returns to land change or as interest (i.e. discount) rates change. Market values reflect many factors above and beyond the capitalized value of agricultural returns including influences of non-agricultural uses, building and other improvement values, returns on competing investments, etc.

U.S.D.A. figures show 2004 as having been a much improved net farm income year, more than double that of a year earlier. While crop prices were lower for corn and soybeans, record yields pushed value of production for both crops above 2003 levels. Wheat prices on average rose in 2004 from the previous year, but lower yields resulted in a slightly lower value of total production. Hay prices fell but yields rose in 2004, generating a small increase in total value of output. Beef cattle and calve prices, as well as hog prices continued on the increase in 2004, each posting sizeable increases. Dairy producers enjoyed significantly higher milk prices in 2004 as compared to 2003. With these generally higher crop and livestock revenues, cash rental rates for cropland have continued to move up. Government support, competition for rented ground, and the eternal optimism of farmers continues to prop up rental values as well. Pasture rental rates responded to the gains in livestock (especially cattle) prices and continued to climb. Direct government payments to farmers decreased in 2004, but continue to be an important source of revenue for U.S. farmers.

Agricultural use-values represent the value of land when used to produce future income via farm production. Historical returns to land (an estimate of future earning capacity) are capitalized into a value using interest rates as a discount rate. Because use-values represent the value of land to produce future income, changes in use-values do not always correspond directly to current income levels of producers. As such, the ability of farmers to pay for land (or taxes) will not always move in the same direction as use-values. This report presents only the calculation of updated use-values, and does not deal with the current financial situation of producers or their ability to pay farm expenses. The severe drought in 2005 will cause financial hardship for many farmers. Figures for 2005 yields and income are not incorporated into the calculation of the current use-values. The current financial situation of agricultural producers needs to be an important consideration in the timing of taxation changes. But there is always a lag between the time of tax changes and implementation, as well as between use-value changes and current farm financial conditions.

The following tables present the computations used to update Missouri agricultural land use-values, changes in use-values from the previous period, and an historical look at use-values for the eight different land grade classifications.

2005 Calculated Use-Values.

2005 crop rent average (6 most recent years take out high and low) = 69.25

2004 crop rent average (6 most recent years take out high and low) = 65.75

Percentage crop rent increase 2004 to 2005 = 5.32 %

(Current USDA Ave. MO cropland rent stands at \$79 per acre)

2005 pasture rent average (5 most recent years) = 24.40

2004 pasture rent average (5 most recent years) = 23.00

Percentage pasture rent increase 2004 to 2005 = 6.09 %

(Current USDA Ave. MO pastureland rent stands at \$27 per acre)

2003 Net Revenue	Times 1 plus % change	2004 Calculated Net Revenue	5 yr. Moving Ave. Capitaliz. Rate	2004 Use-Values
\$118.5461	1.0532319	\$124.8565	0.07835	\$1593.57 Soil Grade 1
\$96.0851	1.0532319	\$101.1999	0.07835	\$1291.64 Soil Grade 2
\$70.6343	1.0532319	\$74.39431	0.07835	\$949.51 Soil Grade 3
\$40.6864	1.0532319	\$42.85217	0.07835	\$546.93 Soil Grade 4
\$24.0588	1.0608695	\$25.52327	0.07835	\$325.76 Soil Grade 5
\$18.1918	1.0608695	\$19.2991	0.07835	\$246.32 Soil Grade 6
\$ 8.9253	1.0608695	\$9.468535	0.07835	\$120.85 Soil Grade 7
N/A	1.0608695	N/A	0.07835	N/A Soil Grade 8

Use-Values and percentage changes.

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I. Introduction

The purpose of this report is to examine trends in agricultural use-values, assessments and tax burdens over the past 20 years. The report does not attempt to develop an alternate methodology for establishing use-values or to critique an existing one. The University of Missouri's Department of Agricultural Economics (UMC) has provided expert advice to the State Tax Commission of Missouri (STC), since 1982. This report takes the calculations of UMC as one of several input sources.

Constitutional and statutory changes first required that use-values become the method for valuing agricultural property in Missouri, effective in 1985. The current statutory specification for how these values are determined appears in Section 137.021 RSMo. The statute provides that the STC will promulgate a value for each of the grades of agricultural and horticultural land that based on soil surveys, soil productivity indexes, production costs, crop yields, appropriate capitalization rates and other factors pertinent to productive capability. The legislature has thereby provided the STC with a ministerial, not policymaking task, though one requiring appropriate discretion. The statute specifically suggests that all pertinent data may come from UMC, though there is no requirement that the STC seek or comply with UMC's advice. To what extent the STC uses other information pertinent to productive capability is unknown. Other input used in the past is not particularly relevant to our current purpose because our intent is to examine outcomes, not evaluate all inputs.

II. Research Questions

This report addresses each of the following questions in its own section:

1. What changes has UMC applied to its methodology over the last 20 years and how do these alterations affect the subsequent UMC values?
2. How do adopted STC values compare to productivity values calculated by UMC?
3. How do the productivity values calculated by UMC and those adopted by the STC compare to other pertinent indicators of productive capability?
4. What is the effect of adopted values on assessments?
5. What are the effects of resulting assessments on the tax burden for agricultural property and the other subclasses of real property?

III. Methodological History

Before 1985, assessments for agricultural real property were one-third of its market value, by law. However, the first statewide reassessment in 1985 required assessing agricultural property on its productive, or use, value rather than market value. The STC commissioned UMC to recommend an appropriate methodology and values. In late 1982, UMC (Ervin and Nolte 1982) provided a report recommending a method of complying with the new requirements and provided resulting use-values. The first reassessment in 1985 used these same values. Subsequently, UMC continued to provide recalculated values at the STC's request.

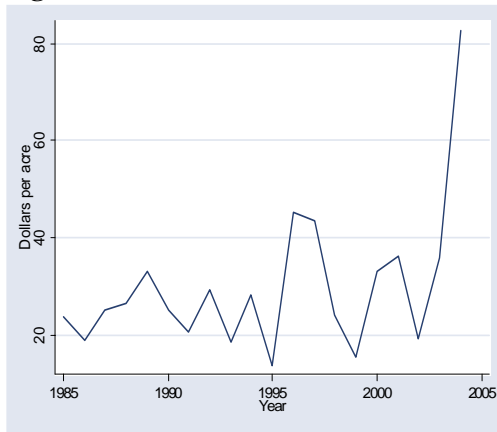
The first change in UMC's procedure reflected the growing significance of supported price levels in agricultural income. From 1987 through 1995, UMC reports supplied two values for each grade of agricultural property, one based on supported prices and another on unsupported prices. This provided the STC with a range of values to consider. In the 1990s, UMC began to express some concerns with the current approach in part due to the effects of not re-examining some of the initial assumptions of 1982. In 1996, Dr. Kevin Moore recommended a change in the procedure for calculating use-values, one that all subsequent UMC reports follow. The new approach uses the change in cash rental rates to signify the relative change in net revenue from period to period. This method required the adoption of values from a base year. Subsequent calculations use 1993's figures

for net crop revenue based on unsupported prices (also referred to as normal net return per acre) as the base year. Adopting a base using only unsupported values, means that all subsequent values are lower than if using supported values or a mid-point. On the other hand, the movement of cash rents implicitly captures the effect of ongoing revenue and cost changes regardless of the source.

For the data used throughout the report for STC adopted values, UMC recommended values and UMC recalculated values, see *Table 1* in the *Appendix*. For a complete summary of the development of use-values since 1982, see *Table 2* and the *Summary of the History of Assessment of Agricultural Real Estate in Missouri (1982-2005)* in the *Appendix*.

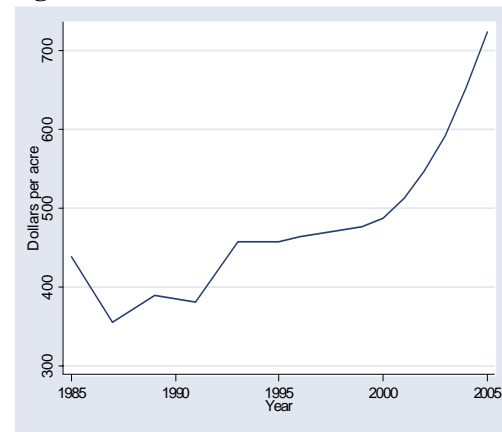
The purposes of Figures 1 and 2 below are to a) show that both the UMC recalculated values¹ and net farm income show an increasing value trend and b) demonstrate that UMC's purposeful adoption of a methodology that would smooth the yearly fluctuations succeeds. Figure 1 depicts increasing, but volatile, net farm income per acre in Missouri. Figure 2 illustrates that UMC's method captures the increasing trend while reducing volatility.

Figure 1. Net farm income/acre



Source: Missouri Agricultural
Statistics Service

Figure 2. UMC Recalculated values/acre



Source: UMC Reports

IV. Comparison of STC Adopted Values with UMC Recommended Values

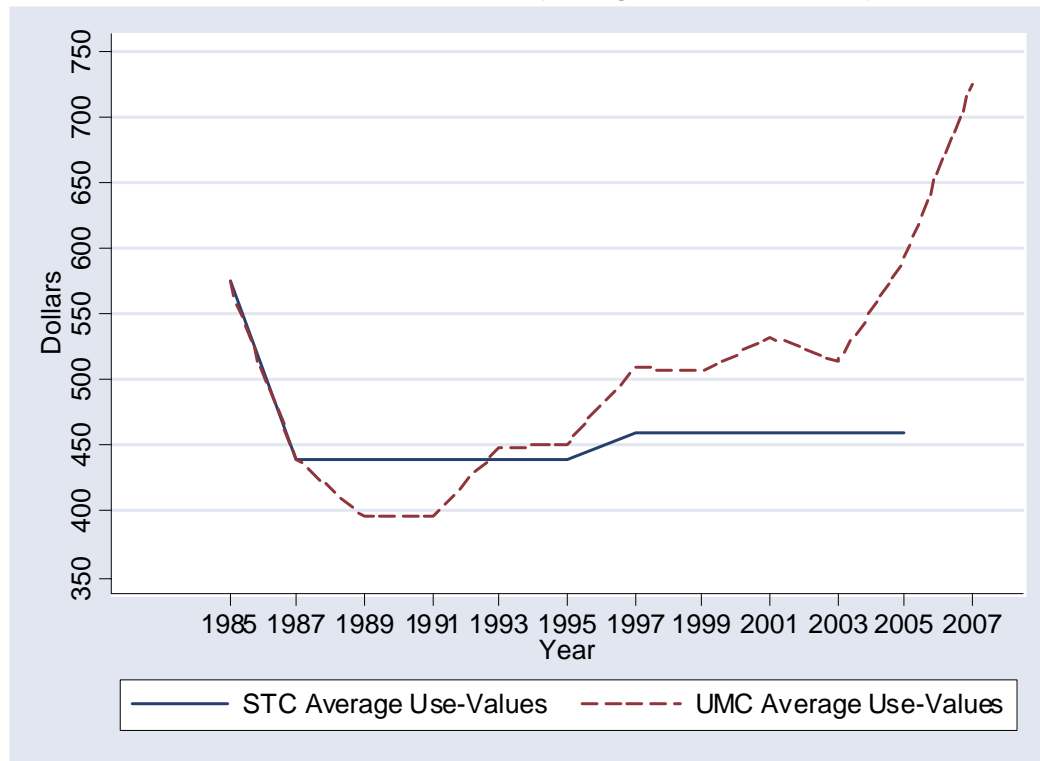
In this section, we compare the values the STC adopted with the values from UMC's analysis. To make a proper comparison, some adjustments of the basic data were required because of the time gaps between the latest data available for UMC's analysis, when the STC takes action and when the new use-values affect assessments.

The STC adopted use-values reflected in Figure 3 are adjusted to the effective reassessment year. The UMC recommended values are those available to the STC at the time they adopted values for the corresponding year. For example, 1993 values in Figure 3 reflect the values assessors used for January 1, 1993. The STC adopted these values September 17, 1990. At that time, the STC had available the values from the UMC 1990 report, which were based on data complete through 1989 and partial data available in 1990. In sum, the data and decision are from 1989 and 1990, but the results produce a 1993 outcome, so they appear as 1993 in the graph.

¹ The UMC recalculated values are the values after the fact when complete data became available, not necessarily the values used when recommendations were made. When multiple values are available, only unsupported values are used.

For actions relevant to reassessment years 1989 through 1999, UMC values for soil grades 1-5 provided a range of values (based on supported and unsupported prices). We used a midpoint to reflect UMC values. The report excludes values for grade 8 land since UMC no longer provides these values. During our analysis, we compared results using medians with results using averages and found no difference in trends, so we use averages.

Figure 3. STC Use-Values (Average of Soil Grades 1-7) Compared to Average UMC Recommended Use-Values (Average of Soil Grades 1-7)



There are several observations worthy of note from Figure 3. For the first two reassessment cycles, 1985 and 1987, the STC chose use-values equal to those recommended by UMC. For the reassessment years 1989 and 1991, the STC opted for no change, while UMC values called for modest decreases. 1989 and 1991 were among the years when UMC reports provided both unsupported and unsupported values. Therefore, while the values the STC adopted for 1989 and 1991 were somewhat above the UMC average values, most of the values adopted by the STC were within the overall range, or very close to it.

By 1993, UMC's values exceeded those adopted by the STC, a pattern that has continued since. In 1993 and 1995, the difference was only 2 to 3%. In 1995, the STC took action (effective for the 2007 reassessment) to raise their values, but did not bring values up to UMC's calculated levels. Since the 1997 reassessment year, the STC has not changed use-values while UMC values continued to rise, creating a generally widening gap between UMC and STC values. In 2001, UMC's values were 14% higher than the STC's values; in 2003 they were 11% higher; and in 2005 UMC's values were 25% higher. The values from the new 2005 UMC report are 58% greater than values used in the 2005 reassessment, easily the largest gap in Missouri's history of assessment by use-value.

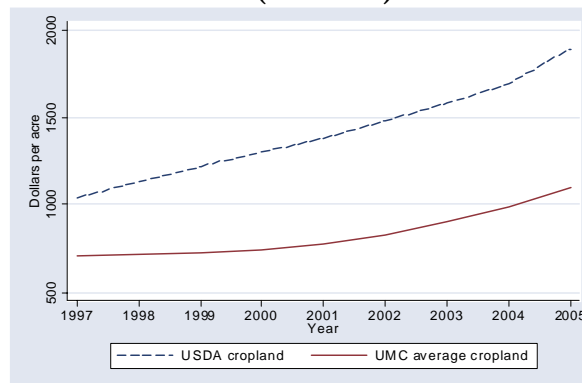
V. Comparing STC's values and UMC's calculations with other indicators of value

The USDA supplies separate *market* values for cropland and pastureland for each state since 1997. *Market* values are not the equivalent of use-values. They respond to factors other than agricultural costs and revenues and are more volatile (UMC 2005). However, the same report suggests that changes in market value are a very useful comparison because changes in market value can confirm other indicators of use value change.

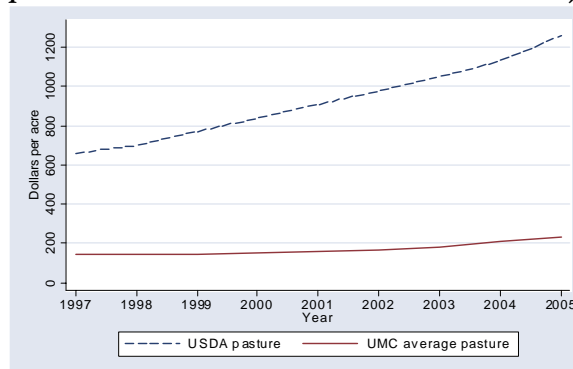
In this section, we first compare UMC's values since 1997 with the corresponding USDA values to confirm the correlation suggested by UMC, then make the same comparison to STC values.

- A.** Comparison to UMC Recalculated Values: Figures 4 and 5 examine the trends of farmland values since 1997 by comparing UMC's final values with USDA market values.²

**Figure 4. UMC Recalculated Use-Values for Cropland
(Average of soil grades 1- 4) compared to USDA Cropland
Values (1997-2005)***



**Figure 5. UMC Recalculated Use-Values for Pastureland Average of soil grades (5-7)
compared to USDA Pastureland Values 1997-2005)***



² The UMC recalculated values, rather than the original recommended values, are used because these graphs are intended to evaluate actual outcomes. They differ from recommended UMC values because they incorporate more complete data. The graphs begin in the year 1997 because data isolating cropland from pastureland values from USDA began in 1997.

As expected, UMC's use-values are lower than USDA's market values over this period. Additionally, as expected, the trend of UMC values correlates to those of the USDA, though UMC's values trail the USDA's, which do not use multiple years of historic data. This delay is inherent in the UMC methodology that incorporates multiple years of historical data. The gap between USDA values and values reported by UMC has grown – whether this entire gap is due to the mentioned delay is not determined. Somewhat unexpectedly, the market values reported by the USDA do not show the expected volatility. However, had the data been available for a longer period (especially if it included the period between 1982 and 1989) we might have seen more dramatic fluctuations. Finally, both indicators of value show that farmland values have constantly increased in this period. While USDA figures for cropland values increased by 82% and pastureland values increased by 91% from 1997-2005, UMC recalculated values for cropland increased by 55% and UMC figures for pastureland increased by 58%.

B. Comparison to STC adopted values

In this subsection, we examine the trend of USDA values to STC adopted values for cropland and pastureland compared to USDA figures since 1997.

Figure 6. STC Use-Values for Cropland (average of soil grades 1-4) Compared to USDA Cropland Values (1997-2005)*

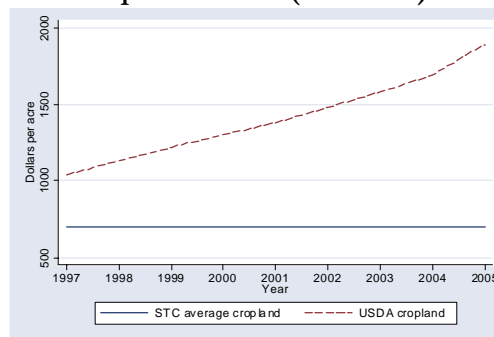
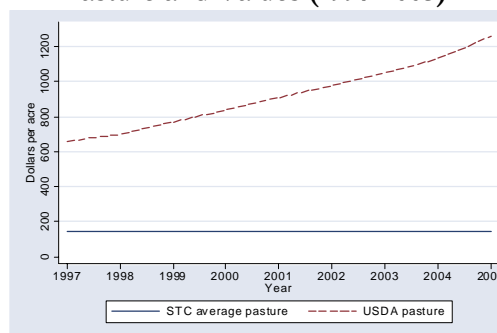


Figure 7. STC Use-Values for Pastureland (average of soil grades 5-7) compared to USDA Pastureland Values (1997-2005)*



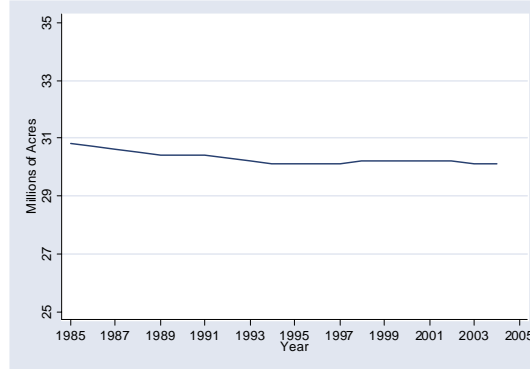
***Sources for Figures 4,5,6 and 7: State Tax Commission Annual Reports (1984-2003) and USDA National Agricultural Statistics Service (2005)**

Since STC values have not changed during a period when USDA calculated values have constantly increased, the result is an ever-widening gap.

VI. Assessed Value of Agricultural Land compared to USDA Land Values

We now begin examining outcomes of the STC adopted use-values – in this section, the resulting assessments. First, we examine whether the quantity of farmland has an appreciable effect on total assessments. The following graph (Figure 8) demonstrates that the quantity of farmland in Missouri has decreased only by only 3.5% since 1985.

Figure 8. Millions of acres of farmland in Missouri

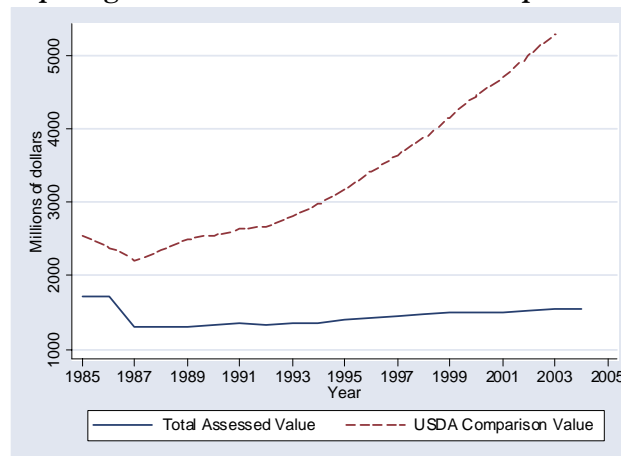


Source: Missouri Agricultural Statistics Service (2005)

The total farmland has decreased in some periods and increased in others. Therefore, we can assume that assessment changes are primarily the result of the STC's use-values, changes in improvements and adjustments by assessors.

Figure 9 compares the total assessed value of the agricultural subclass of real property in Missouri (which includes land and improvements, but not the dwelling, which is classified as residential property) to USDA figures for the value of land and buildings (including the dwelling).³

Figure 9. Comparing Missouri Assessments to a Comparable USDA Value:



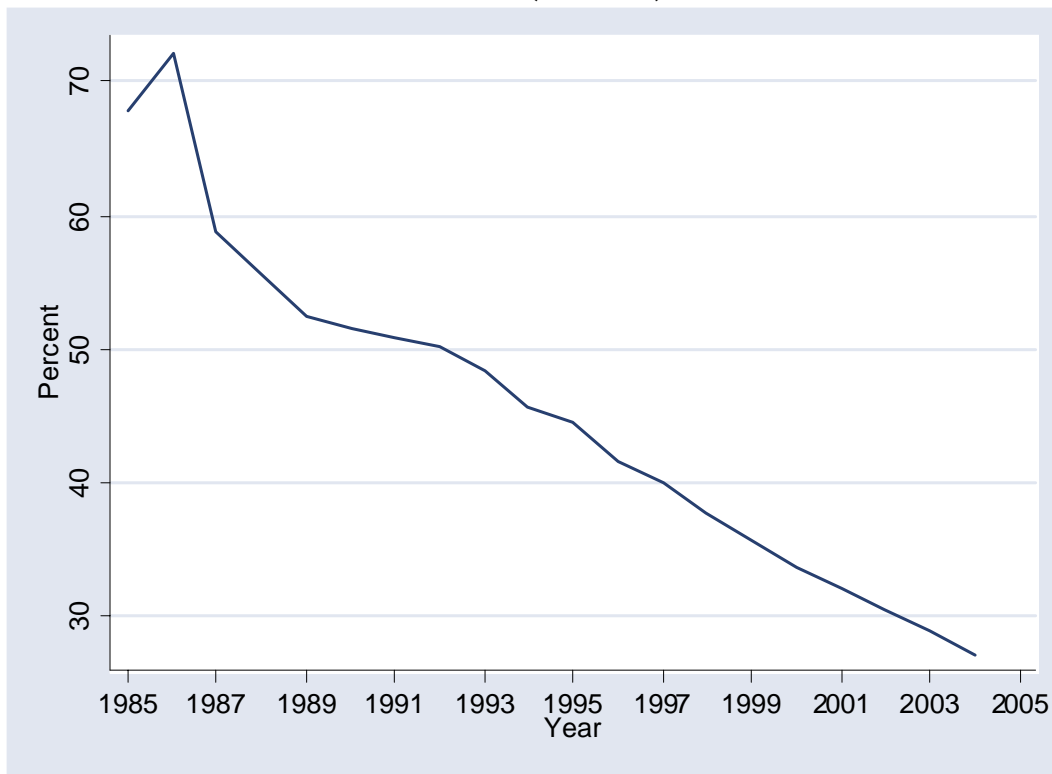
Sources: Missouri Agricultural Statistics Service and STC Annual Reports

³This value is also known by USDA as the farm real estate value, defined as, "the value at which all land and buildings, including dwelling, could be sold under current market conditions." This total real estate value (real estate value/acre multiplied by number of acres of farmland) is multiplied 12 percent to provide a USDA Comparison Value.

When viewing Figure 9, one expects the USDA line to be higher because it reflects market value (not use-value) and it includes dwellings. However, the expectation is that both lines would move in similar, though not exact, patterns. Taking into consideration time lags, the expected correlation appears only through 1987. Subsequently, Missouri's assessments, while growing slowly, show an expanding gap between actual assessments and the comparison indicator of value. Since 1987, the comparison value has risen by 139%, while assessed values have increased by only 18%.

Another means of portraying the same outcome is demonstrated in Figure 10, which portrays the percent that assessed value was of the comparison value over the evaluation period.

Figure 10. Assessed Value of Agriculture Subclass as a percent of the USDA Comparison Value (1985-2005)



Sources: Missouri Agricultural Statistics Service and Missouri State Tax Commission

The graph above paints a rather dramatic picture over the past 20 years. From a high of 72 percent in 1987 to a low of 27 percent in 2004, Missouri's assessments are less and less comparable to this USDA indicator of value.

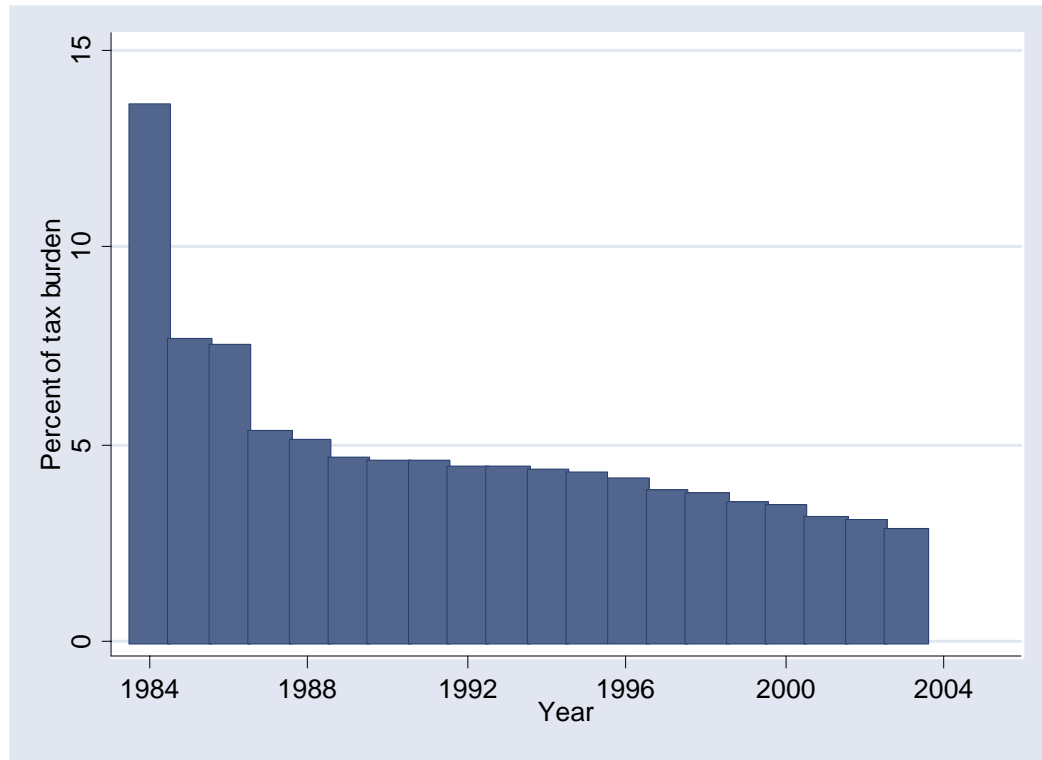
VII. Effect on Tax Burden in Missouri

The ultimate outcome for examination is the relative tax burden borne by each subclasses of real property: agriculture, commercial and residential. We examined these outcomes using a variety of approaches.⁴

⁴ Data concerning assessed values for the years 1984-2004 comes from the State Tax Commission. Necessary totals and percentages are calculations by the PPRC.

The following graph (Figure 11) shows the changing percent of the real property tax burden borne by Missouri's agricultural real property.

Figure 11. Agriculture as a percent of Total Assessed Value of real property.



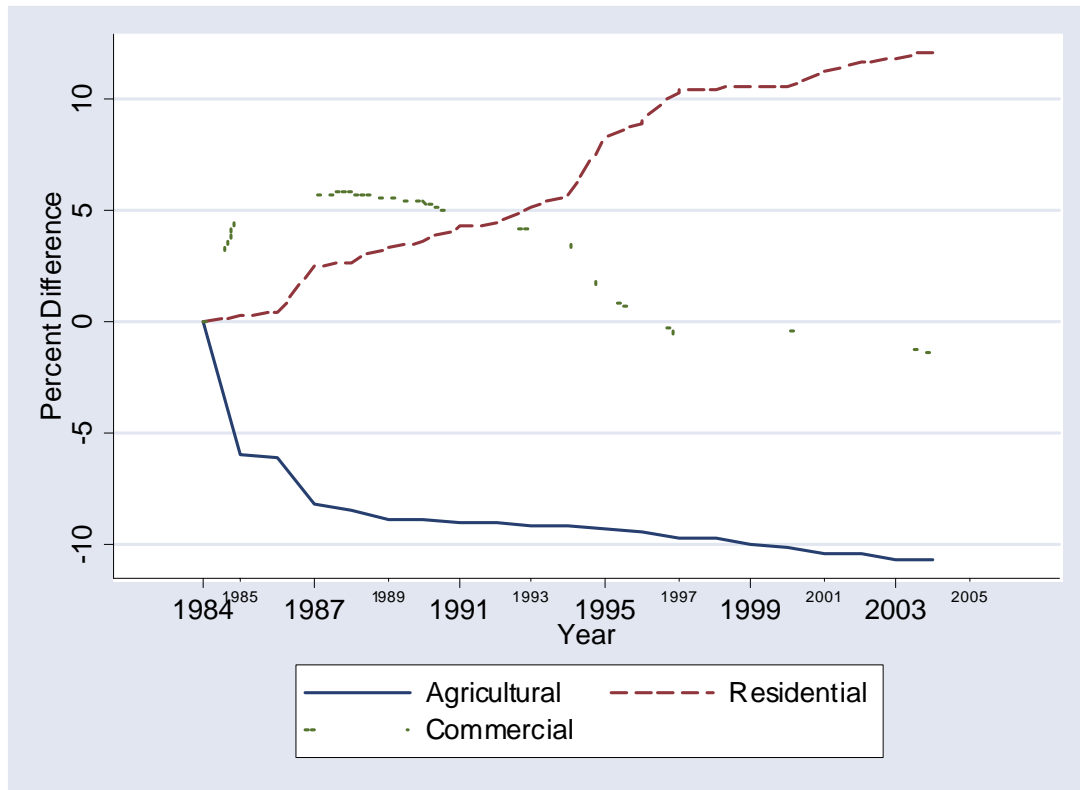
Source: PPRC calculations based on STC assessment data.

In Figure 11, we observe three main points of interest. First, the impact of the 1985 reassessment combined with a new policy that valued farm real property based on use-valuation resulted in a substantial reduction in the tax burden on agricultural real property, from 13.6% to 7.66%.

Second, another large reduction in agriculture's share of the tax burden occurred between 1985 and 1987, from 7.66% to 5.3%. All sources of data indicate that agricultural values were dropping then, so the reduction from 1985 to 1987 conforms to other indicators. Of particular note is that the STC adopted three sets of values before applying a final set to the 1987 reassessment in an effort to maintain pace with this downtrend, hence not imposing the burden of old data on the agricultural sector. Third, the period from 1987 through 2003 shows that agriculture faces an ever-decreasing share of Missouri's tax burden, now only 2.88% of all real property as of 2003, a drop of 46% in its relative share since 1987.

Another approach to examining the change in tax burden is to look at all three subclasses at once and measure the change in their burden from the base year of 1984 as seen in Figure 12.⁵

Figure 12. Illustration of Tax Burden Change: Percent Difference from base year 1984 in Total Assessed Value of Agricultural, Residential and Commercial Real Property.



Source: STC Annual Reports (1984-2004)

Examine this graph within distinct periods. First, note the immediate impact of reassessment and policy change on the tax burdens from 1984 to 1985. The residential burden remained approximately constant. The agricultural burden fell dramatically, and that burden shifted to the commercial subclass to compensate. As noted previously, the agricultural burden fell significantly again in 1987 and the residential burden compensated. After 1987, the clearest trends are that agriculture continues to fall, while residential burdens continue to rise. Examining the commercial subclass burden is more complex. Overall, its share of the tax burden is now slightly less than in 1984, but considerably (about 6-7%) less than in 1985. However, the classification of some properties has changed during this period. In 1985, multi-family property and mobile home property were classified commercial; however, all multi-family and some mobile home property are now residential. Data to separate the effects is not available because the changes occurred over several years. Overall, the small reduction

⁵ For example, the year 1991's percent value would equal the subclass's 1991 percentage minus its 1984 percentage. A change of zero percent would indicate no change in the subclass's value as a percent of the total assessed value of real property since 1984.

in the commercial burden, together with the large reduction in the agricultural burden is borne by an increase in the tax burden of the residential subclass. By the year 2004, the percent that the subclass of agriculture contributes to the total assessed value of real property dropped by from 13.6% to 2.88% (almost 11%), meanwhile commercial dropped by 1.4% and residential rose by 12.2%, since the base year of 1984.

VIII. Final Observations

Ideally, the STC would set values for use in 2007 based on nearly complete 2006 information. However, Missouri statutes require setting values more than a year in advance of their application. The result is that use-values, regardless of the method used, can never be *completely current*. One question that occurred to us is whether it might be appropriate to use alternate approaches depending on the consistency of recent trends. For example, in the most recent years, all pertinent evidence shows a consistently rising trend in values. Perhaps in such a circumstance, the length of historical data could be reduced, so that the trend could be captured more readily and fully. This approach would have had the opposite effect in early years; that is the UMC recommended values would have declined faster. On the other hand, when there is volatility taking a longer set of data into account seems to provide more of a safety net.

Even though by necessity UMC's recommended values are made well in advance and are based on historical data, their calculated values generally track well with other value indicators.

A review of actual value data, as opposed to the data available when decisions were made, suggests that agricultural assessments during the first two or three reassessments (1985-1989) may have been high. Similarly, the use of old data in the UMC method in recent years results in lower calculated values than final data indicates. One benefit of a consistent approach, though, is that values suggested by the UMC method will almost eventually even out. While they will trail an upward trend, they will also trail a downward trend. Of course, to the extent that the long-term trend is unidirectional, they will never fully catch up.

A large, and rapidly growing, gap has formed between various indications of value and the STC's current use-values. It seems reasonable to ask that the STC make a clear record of what information it uses and what method it applies to reach its conclusions. If the compilations of UMC are no longer considered as valuable as in the past, documentation of the STC's new approach is desirable.

Finally, in Missouri, the revenue that taxing jurisdictions may capture subsequent to each reassessment is limited. If any segment of taxable property achieves a reduced burden, other segments of the property tax base must compensate.

Appendix

Table 1: STC and UMC productivity values used for graphs

*	1985	1987	1989**	1991**	1993**	1995**	1997**	1999**	2001	2003	2005
Grade1_STC	1117	894	894	894	894	894	985	985	985	985	985
Grade1_UMC	1117	894	821	821	921	937	1075	1109	1145	1135	1308
Grade1_UMCr	894	744	814	807	983	1014	1031	1053	1135	1308	1594
Grade2_STC	953	754	754	754	754	754	810	810	810	810	810
Grade2_UMC	953	894	684	684	772	782	894	910	943	920	1060
Grade2_UMCr	754	614	673	662	810	822	835	854	920	1060	1292
Grade3_STC	767	595	595	595	595	595	615	615	615	615	615
Grade3_UMC	767	894	529	529	602	605	690	684	715	676	779
Grade3_UMCr	595	467	512	496	614	604	614	627	676	779	950
Grade4_STC	548	409	409	409	409	409	385	385	385	385	385
Grade4_UMC	548	894	342	342	402	347	450	418	446	390	449
Grade4_UMCr	408	293	324	302	383	348	354	361	390	449	547
Grade5_STC	330	221	221	221	221	221	195	195	195	195	195
Grade5_UMC	330	894	190	190	226	227	230	203	223	222	259
Grade5_UMCr	221	173	182	183	194	195	206	206	222	259	326
Grade6_STC	194	130	130	130	130	130	150	150	150	150	150
Grade6_UMC	194	894	133	133	140	141	148	148	170	168	196
Grade6_UMCr	130	133	140	141	148	148	156	156	168	196	246
Grade7_STC	109	69	69	69	69	69	75	75	75	75	75
Grade7_UMC	109	894	70	70	75	74	77	72	88	82	96
Grade7_UMCr	69	70	75	74	77	72	76	76	82	96	121

* **Grade#_STC:** The value adopted by the STC for soil grade #, that applies in the given reassessment year. These values were adopted one to two years before assessors used them. For example, the values used for the 1997 reassessment as reported above, were adopted in 1995, at which time the STC had available UMC calculations in their 1994 report that reflected data known at that time (complete 1993 supported and unsupported data).

Grade#_UMC: The value supplied by UMC in the report before the STC took action. For example, the 1997 values reflect those in the 1994 UMC report.

Grade#_UMCr reflect UMC revised values for the given year. For example, 1997 values reported above reflect 1997 values that were not available when STC action was required in 1995. Rather they come from reports subsequent to 1997.

** For these years, the UMC reports provided two values. The numbers shown are the midpoint between supported and unsupported values. Note: We did not obtain the original reports made in 1986 through 1989, so the values shown were obtained from historical values shown in subsequent reports. For example, 1989 uses 1987 values found in the 1990 report; 1993 uses 1989 values found in the 1990 report; 1995 uses 1991 values found in the 1992 report; 1997 uses 1993 values found in the 1994 report; and 1999 uses 1995 values found in the 1996 report. Thereafter, UMC supplied only one value.

Table 2. History of STC rulings: Chapter 137 Sec. 137.021

ACTION DATE	12/13/83	10/17/84	11/15/85	9/31/86	11/8/88	9/17/90	10/13/92
Effective Date	3/12/84	4/11/85	5/11/86	12/1/86	12/31/88	2/14/91	6/7/93
Reassessment Application	1985	1987	1987	1987	1989	1993	1995
Annual Report	1983	1984	1985	1986	1988	1990	1992
UMC report	1982	*	*	*	*	1990	1992
Most recent year of data	1982					1989	1991

ACTION DATE	9/15/94	11/15/96	12/28/99	12/31/01**	12/31/03**	12/05
Effective Date	3/30/95	6/30/97	7/30/00	2003	2005	N/a
Reassessment Application	1997	1999	2001	2003	2005	2007
Annual Report	1994	1996	1999	2001	2003	
UMC report	1994	1996	1999	2001	2003	2005
Most recent year of data	1993	1995	1999	2001	2003	2005

*We did not obtain the original UMC reports from 1983 through 1989. Historical values from the 1990 report provided the values for the years between 1983 and 1989.

**No amended regulation was adopted in 2001 or 2003 so previous use-values continued.

Summary of the History of Assessment of Agricultural Real Property (1982-2005)

Before 1985: Missouri law required the assessment of all agricultural real property at one-third of its market value. The law required the same of residential and commercial real property. However, poor assessment practices throughout Missouri led to the need for the general statewide reassessment of 1985 to reestablish a relationship between statutory requirements and actual assessments.

Preparing for 1985: Missouri changed the statutory method for assessing agricultural property from a market value standard to a productive capability standard, to be effective as of January 1, 1985. To provide a basis for the new use values, the STC commissioned a report from UMC, delivered at the end of 1982. The methodology and values recommended were adopted in December 1983 and applied during the reassessment of 1985. UMC presented a study, which suggested implementation of a new methodology for these tax calculations. According to this study, market data for agricultural land was subject to a number of limitations when it was used to derive a taxable value, including the fact that farmland parcels vary in value based on size, proximity to services, and variation in improvements. Additionally, the farmland market has few and a mixture of sales per period. These authors opted to utilize an income capitalization approach to produce productive use-values. Net returns to agricultural land were found using crop yield data averaged over 20 years to remove weather influences and a modified six-year average of crop prices. The procedure also reflects input requirements. Soil in Missouri was divided in 8 grades based upon the Land Capability Classification system (LCC). Finally, a capitalization rate was calculated using a five-year average of the Federal Land Bank average farmland loan rate and applied to the net returns to suggest a range of use-values for each of the eight grades of soil found in Missouri agricultural land (Ervin and Nolte 1982).

- 1983:** The original rule required by statute concerning the assessment of agricultural land based on its productive or “use-value” is adopted with values that would apply on January 1, 1985. The values adopted reflect the midpoint of the range of values recommended by UMC’s 1982 report
- 1984:** The STC begins the process of establishing values for implementation in 1987. Action is taken to adopt new values to be effective in 1987, but these values would later be repealed and supplanted by lower ones.
- 1985:** Values adopted in 1983 based on the 1982 UMC report become effective. The STC repeals the values or 1987 it adopted in 1984 and sets new values as farm values decline.
- 1986:** Values adopted for use in 1987 are repealed for the second time and a third set of values adopted as farmland values continue to slide. These values do go into effect for the 1987 reassessment. This is the only time the STC adopts multiple values for one reassessment period.
- 1987:** The second reassessment using use-values occurs using values lower than in 1985. This is the first year that UMC reports provide alternative values based on supported and unsupported prices.
- 1988:** In November, an emergency amendment is adopted to set the values for 1989. At the same time the STC adopts values for 1991 that are the same as for 1989 and 1987.
- 1989:** The third reassessment uses the same values as 1987.
- 1990:** An amendment is adopted to set use-values for the reassessment in 1993. The STC again chooses to keep the values the same.
- 1991:** The fourth reassessment uses the same use-values as in 1987 and 1989.
- 1992:** Use-values for 1995 are adopted, without change from previous values.
- 1993:** The fifth reassessment uses the same productivity values as 1987, 1989, and 1991.
- 1994:** Use values for 1997’s reassessment are adopted. The values are greater than those applied to the five reassessments from 1987 through 1995.
- 1995:** The sixth reassessment uses the same values as in 1987, 1989, 1991, and 1993. According to the 1996 UMC report, this is the last year of data that reports both supported and unsupported prices. After this year, only unsupported values are reported.
- 1996:** Dr. Moore of UMC proposes new methodology for calculating use-values. This method utilizes 1983 values using unsupported prices as its baseline. A six-year average of the crop rental rates, taking out the highest and lowest values, is used to calculate the percent change in soil grades 1-4 and a five year-average is used to calculate the percent change for soil grades 5-8 to determine the percent changed for net revenue from the previous base. A five-year average capitalization rate is then applied to calculate the use-value. The benefits of this approach, cited by Moore, are that it lessens the necessary calculations, mitigates the effects of old technology, arrives at more uniform percent changes across soil grades, and finds

values more consistent with the United States Department of Agriculture (USDA) figures for farm real estate value changes. The STC apparently accepts the new methodology because all future UMC reports use it.

Values for the 1999 reassessment are adopted, leaving use values unchanged from those in effect initially adopted for use in 1997

1997: The seventh reassessment uses values set in 1994 that are different from the previous five reassessments.

1999: The eighth reassessment uses the same values as 1997.

2001: The ninth reassessment uses the same values as 1997 and 1999.

2003: The tenth reassessment uses the same values as in 1997, 1999 and 2001

2005: The eleventh reassessment uses the same values as in 1997, 1999, 2001 and 2003.

Use values for the 2007 reassessment will be adopted or continued by December 31.

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**College of Agriculture,
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The Economic Outlook for Missouri Agriculture

Introduction

In the last few years Missouri agriculture has experienced a rapid change in the economic outlook. The 2004 Missouri farm income estimate of \$2.5 billion may keep its place in the record book as the highest level of farm income for many years to come. Many factors from record crop yields to record livestock prices played into 2004 becoming a record year for Missouri farm income.

Missouri farm income in 2005 is projected to be near \$1 billion. Decreased cash receipts, increased energy-driven production costs, and declining crop inventories will lead to the lower estimate.

The major issues that have been responsible for these rapid changes in Missouri farm income will be explored in detail and a look ahead at 2006 will be investigated to provide a glimpse of where farm income in the state could head. That will be followed with some issues that could make the Missouri farm income outlook different than shown here.

Record farm income in 2004

Missouri farm income is expected to reach near \$2.5 billion in 2004 (see Table one). That is \$1.5 billion higher than the reported 2003 Missouri farm income level. Two major drivers are responsible for the record setting year of 2004. Cash receipts were \$650 million higher

Table 1. Factors Influencing the Economic Outlook for Missouri Agriculture

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Missouri area-weighted, crop receipts less variable costs (\$/acre)*	182.97	153.03	109.65	101.85	146.47	143.84	135.88	154.74	183.79	113.54	123.43
Missouri farm income (mil. \$)	1,357.5	1,306.0	727.1	464.9	999.4	1,094.5	586.3	1,078.3	2,492.0	1,076.9	1,197.2
Direct government payments (mil.)	291.4	278.0	428.0	717.1	869.4	817.0	398.4	538.4	470.3	609.2	606.5
Missouri ag commodity prices											
Corn (\$/bu.)	2.77	2.45	1.92	1.96	1.78	1.96	2.45	2.46	1.90	1.84	2.05
Soybeans (\$/bu.)	7.29	6.39	4.90	4.67	4.55	4.32	5.54	7.52	4.95	4.87	5.41
Wheat (\$/bu.)	4.12	3.09	2.31	2.10	2.28	2.42	3.03	3.09	3.20	3.10	2.97
Sorghum (\$/bu.)	2.37	2.20	1.71	1.67	1.76	1.94	2.36	2.40	1.74	1.73	1.92
Cotton (\$/lb.)	0.69	0.69	0.69	0.47	0.56	0.30	0.44	0.60	0.41	0.48	0.49
Rice (\$/cwt.)	10.30	10.00	8.75	5.60	5.40	3.70	3.90	7.20	7.00	7.00	5.82
Hay (\$/ton.)	69.50	71.00	68.00	72.00	70.50	75.00	67.50	64.00	59.00	61.62	62.67
Cattle (\$/cwt.)	48.80	64.40	62.30	65.60	76.00	76.20	69.40	77.00	92.30	95.47	89.48
Hogs (\$/cwt.)	50.40	50.90	32.40	27.50	38.60	41.30	30.10	34.10	46.10	44.18	39.21
Milk (\$/cwt.)	15.10	13.70	15.60	14.70	12.10	14.90	12.30	12.60	16.40	15.51	13.91

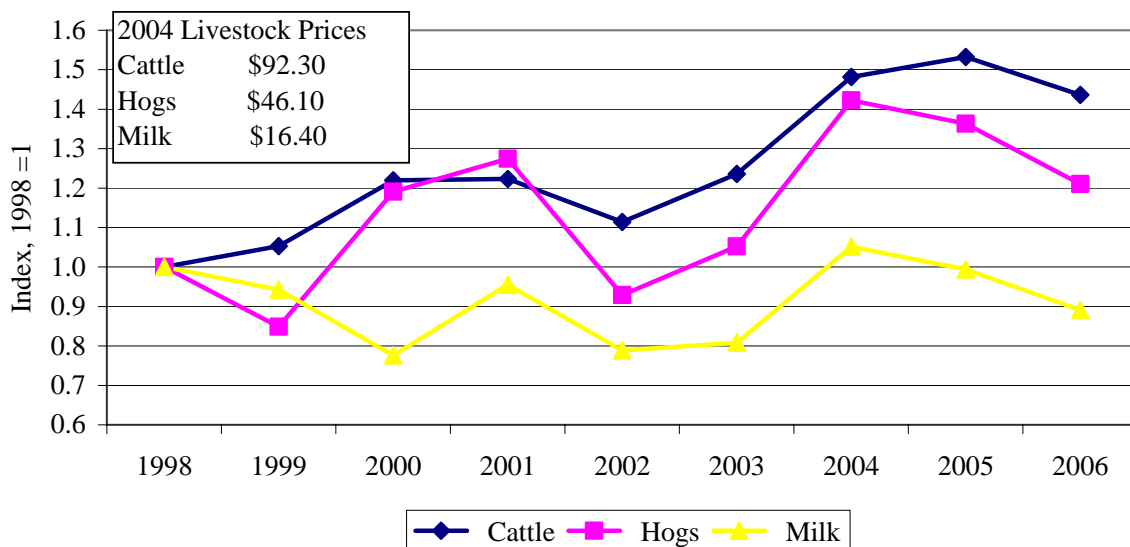
* Corn, sorghum, wheat, soybeans, cotton and rice crop receipts less variable costs weighted by planted area of each of the commodities. The receipts portion includes government payments received. Fixed costs are not included in the calculation.

in 2004 than in 2003 and the value of the change in inventory was \$922 million higher over the two years (full Missouri farm income tables can be found in the appendix of this report). 2004 cash receipts increased as a result of increased livestock and crop receipts.

Higher livestock receipts were driven by higher and sometimes record-level prices, with every livestock commodity experiencing larger receipts in 2004 relative to 2003. Record beef, chicken, and milk prices combined with much stronger hog prices than we have seen for several years provided much of the increase to Missouri livestock receipts.

Livestock receipts are expected to decrease somewhat in 2005 but remain at historically high levels. Cattle prices have maintained much of the price strength gained in 2004 through 2005. The strength in cattle prices has been a combination of strong demand and short supplies as we are in the bottom of the cattle cycle.

Figure 1. Missouri Livestock Prices



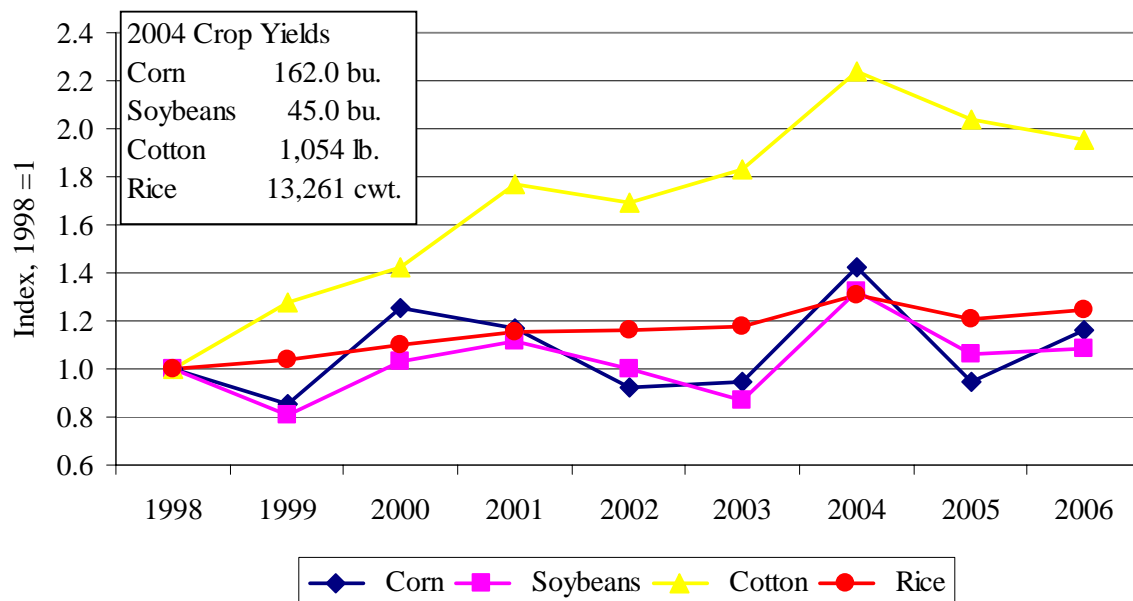
Crop receipts increased in 2004 due in large part to record yields for many commodities. Corn yields reached a record level of 162 bushels per acre in 2004. Growing conditions seemed to be favorable across the state leading to yields for all crop commodities at or near record levels.

High crop yields lead to high production levels, which ultimately left more crops in the hands of farmers at the end of the year. That is the reason that the change in the value of inventory adds \$922 million to Missouri farm income in 2004.

Crop receipts are expected to decline in 2005 as receipts are lower for every crop. Likewise, normal yields in 2005 will shrink crop inventories in Missouri and result in a negative change in the value of inventory.

With the declines in crop and livestock receipts projected for 2005 and 2006 and increased input costs expected as a result of high energy prices and climbing interest rates, Missouri farm income is expected to fall in the range of \$1.1 to \$1.2 billion for 2005 and 2006.

Figure 2. Missouri Crop Yields



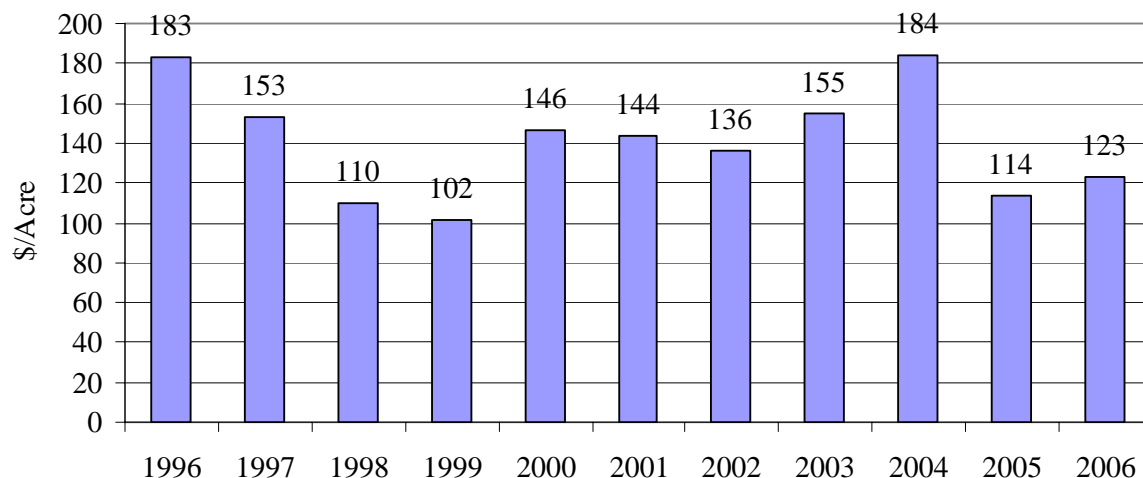
Missouri Crop Returns

At \$184 per acre, weighted crop returns in 2004 returned to levels that Missouri farmers had not seen since 1996. In large part, the increase in returns for 2004 can be attributed to the large increase in crop yields. Even though market prices for many crops were lower in 2004, the increase in yields more than offset the low prices and market receipts moved higher. Higher government payments in the form of loan deficiency payments and counter-cyclical payments also contributed to the increased returns.

For 2005, weighted crop returns in Missouri are expected to fall by \$70 per acre. Short crops due to dry weather in many parts of the state resulted in a decline in market receipts for many crops. Although many parts of Missouri had dry weather, many U.S. crop production estimates remain large keeping crop prices lower as well. 2005 markets returns for corn in Missouri are lower by \$108 per acre relative to 2004 corn market receipts of \$308 per acre.

With higher prices for many crops in 2006, Missouri crop returns move higher but gain only \$9 over the 2005.

Figure 3. Missouri Crop Returns



¹* Corn, sorghum, wheat, soybeans, cotton and rice crop receipts less variable costs weighted by planted area of each of the commodities. The receipts portion includes government payments received. Fixed costs are not included in the calculation.

Risks to Missouri's Agricultural Outlook

There are many risks in providing this look ahead at Missouri farm income. Estimates provided here by FAPRI are conditioned on many assumptions. For example, FAPRI estimates assume that crop yields will return to trend levels. If Missouri was to have a drought (perfect growing conditions) Missouri farm income would likely be lower (higher) than shown here.

Government payments shown in the baseline assume no changes in farm policy relative to the 2002 farm bill. Current federal budget cutting efforts could trim the amount of money spent on agricultural programs in Missouri. Given the continued federal budget deficits facing the United States today, dealing with the cost of items like hurricane relief and the war in Iraq could result in subsequent rounds of budget tightening that could further reduce agricultural spending.

The Missouri livestock sector estimates could also require adjustment. We have already seen the effects of trade restrictions in response to animal disease outbreaks. Further cases of BSE, an outbreak of foot and mouth disease, or bird flu could significantly alter the livestock outlook.

Energy prices are also making it difficult to project future production expenses. Diesel fuel prices that at times have run nearly \$1 per gallon higher in 2005 have significantly raised the cost of producing agricultural products in Missouri. It remains unclear where energy costs will move over the next 18 to 24 months.

Summary

Missouri producers should not expect Missouri farm income to stay at the level experienced in 2004. Already in 2005 Missouri farm income is expected to retreat to a level that is closer to what Missouri agriculture experienced for the early part of this decade. Current FAPRI estimates suggest that 2006 will be another year with Missouri farm income near that \$1 billion mark.

There are many uncertainties to this forecast for Missouri farm income. There is a possibility that 2006 farm income could be lower than shown here if government payments were cut as Congress deals with federal budget pressures or energy costs remain at some of the highs experienced in 2005. On the other hand, the farm income estimate will be too low if favorable weather led to the kind of growing conditions we found in 2004 across Missouri.

Appendix. Missouri Farm Income Tables

Missouri Crop Production and Prices

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Planted		(Thousand Acres)										
Corn		2,650	2,700	2,650	2,650	2,850	2,700	2,800	2,900	2,950	3,100	2,998
Soybeans		4,100	4,900	5,100	5,400	5,150	4,950	5,050	5,000	5,000	5,000	5,029
Wheat		1,600	1,150	1,350	980	1,050	900	900	960	1,050	590	898
Sorghum		580	420	330	320	280	230	200	215	150	135	140
Cotton		390	395	370	380	400	405	380	400	380	440	410
Rice		97	122	145	186	170	211	190	176	196	216	208
Harvested												
Corn		2,540	2,600	2,500	2,550	2,770	2,600	2,700	2,800	2,880	2,950	2,894
Soybeans		4,050	4,850	5,000	5,350	5,000	4,900	5,000	4,950	4,960	4,950	4,981
Wheat		1,250	1,080	1,250	920	950	760	760	870	930	540	797
Sorghum		560	400	320	310	270	220	190	210	145	130	135
Cotton		385	390	357	377	388	400	368	390	378	435	401
Rice		95	117	143	184	169	207	182	171	195	211	203
Hay		3,880	3,650	3,900	3,990	4,090	4,280	4,250	4,250	4,350	4,100	4,178
Yields		(Per Harvested Acre)										
Corn	Bu	134.0	115.0	114.0	97.0	143.0	133.0	105.0	108.0	162.0	108.0	132.2
Soybeans	Bu	37.0	36.0	34.0	27.5	35.0	38.0	34.0	29.5	45.0	36.0	37.0
Wheat	Bu	39.0	54.0	46.0	48.0	52.0	54.0	44.0	61.0	52.0	54.0	53.2
Sorghum	Bu	91.0	92.0	83.0	71.0	92.0	94.0	85.0	77.0	108.0	71.0	93.7
Cotton	Lb	737	695	471	601	668	834	796	862	1,054	960	918
Rice	Lb	5,551	5,300	5,200	5,400	5,700	6,000	6,050	6,131	6,801	6,300	6,466
Hay	Tons	1.87	2.01	2.08	1.95	1.83	1.91	1.96	1.91	2.17	1.84	2.00
Production		(Thousands)										
Corn	Bu	340,360	299,000	285,000	247,350	396,110	345,800	283,500	302,400	466,560	318,600	382,582
Soybeans	Bu	149,850	174,600	170,000	147,125	175,000	186,200	170,000	146,025	223,200	178,200	184,116
Wheat	Bu	48,750	58,320	57,500	44,160	49,400	41,040	33,440	53,070	48,360	29,160	42,384
Sorghum	Bu	50,960	36,800	26,560	22,010	24,840	20,680	16,150	16,170	15,660	9,230	12,615
Cotton	Bales	591	565	350	472	540	695	610	700	830	870	767
Rice	Cwt	5,273	6,201	7,436	9,936	9,633	12,420	11,011	10,484	13,261	13,293	13,118
Hay	Tons	7,270	7,340	8,125	7,791	7,499	8,179	8,323	8,122	9,420	7,528	8,337
Farm Price		(Dollars per Unit)										
Corn	Bu	2.77	2.45	1.92	1.96	1.78	1.96	2.45	2.46	1.90	1.84	2.05
Soybeans	Bu	7.29	6.39	4.90	4.67	4.55	4.32	5.54	7.52	4.95	4.87	5.41
Wheat	Bu	4.12	3.09	2.31	2.10	2.28	2.42	3.03	3.09	3.20	3.10	2.97
Sorghum	Bu	2.37	2.20	1.71	1.67	1.76	1.94	2.36	2.40	1.74	1.73	1.92
Cotton	Lb	0.69	0.69	0.69	0.47	0.56	0.30	0.44	0.60	0.41	0.48	0.49
Rice	Cwt	10.30	10.00	8.75	5.60	5.40	3.70	3.90	7.20	7.00	7.00	5.82
Hay	Ton	69.50	71.00	68.00	72.00	70.50	75.00	67.50	64.00	59.00	61.62	62.67
Land Use		(Thousand Acres)										
Planted		13,297	13,337	13,845	13,906	13,990	13,676	13,770	13,901	14,076	13,581	13,860
Annual Idled		0	0	0	0	0	0	0	0	0	0	0
CRP		1,655	1,608	1,363	1,359	1,427	1,541	1,552	1,551	1,557	1,586	1,604
Total		14,952	14,945	15,208	15,265	15,417	15,217	15,322	15,452	15,633	15,167	15,464

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Cattle and Calves

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Jan 1	(Thousand Head)										
All Cattle & Calves	4,650	4,550	4,350	4,400	4,350	4,250	4,350	4,500	4,350	4,450	4,591
Beef Cows	2,185	2,140	2,045	2,065	2,062	2,070	2,060	2,116	2,125	2,161	2,227
Calves Born	2,170	2,090	2,070	2,070	2,060	2,060	2,090	2,080	2,060	2,121	2,180
Inshipments	40	40	40	40	40	40	36	40	40	40	40
Marketings											
Cattle	968	1,003	783	950	965	790	827	969	865	814	850
Calves	1,120	1,140	1,080	1,008	1,038	1,000	939	1,101	946	1,011	1,055
Farm Slaughter	7	7	7	7	7	5	5	5	4	4	4
Deaths											
Cattle	70	60	60	70	65	70	75	70	65	66	69
Calves	145	120	130	125	125	135	130	125	120	124	127
	(Million Pounds)										
Marketings	1,271	1,310	1,096	1,204	1,229	1,086	1,060	1,259	1,106	1,090	1,138
Prices	(Dollars per Cwt)										
Cattle, Missouri Avg	48.8	64.4	62.3	65.6	76.0	76.2	69.4	77.0	92.3	95.5	89.5
Calves, Missouri Avg	53.9	81.8	79.5	85.1	102.0	99.5	92.3	101.0	121.0	128.3	119.2

Hogs and Pigs

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Dec 1, Preceding Year	(Thousand Head)										
Breeding	480	450	440	400	410	380	375	360	340	340	344
Total Market	3,070	3,000	3,110	2,900	2,740	2,520	2,575	2,590	2,610	2,560	2,642
Pig Crop	6,517	6,924	6,783	6,587	6,248	6,365	6,220	6,099	6,112	6,209	6,380
Inshipments	823	1,200	1,600	1,550	1,570	1,590	1,800	1,810	1,650	1,675	1,700
Marketings	7,063	7,672	8,331	7,935	7,726	7,394	7,614	7,478	7,461	7,441	7,630
Farm Slaughter	2	2	2	2	2	2	1	1	1	1	1
Deaths	375	350	300	350	340	415	405	430	350	356	365
	(Million Pounds)										
Production	1,333	1,411	1,421	1,238	1,215	1,188	1,160	1,100	1,142	1,107	1,146
Prices	(Dollars per Cwt)										
Missouri Average	50.40	50.90	32.40	27.50	38.60	41.30	30.10	34.10	46.10	44.18	39.21

Poultry

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	(Thousand Head)										
Broiler Slaughter *	246,300	250,000	255,000	258,800	240,000						
Turkey Slaughter	20,500	21,000	22,000	22,000	23,000	24,000	25,500	23,500	21,500	20,500	19,845
Egg Layers on Farms	6,644	6,693	6,644	6,390	6,141	6,882	6,923	6,841	7,043	7,232	7,442
	(Million Pounds)										
Broiler Production *	1,059	1,075	1,097	1,165	1,080						
Turkey Production	539	563	598	616	619	660	783	724	667	642	628
Egg Production (Eggs)	1,674	1,719	1,732	1,690	1,614	1,791	1,841	1,861	1,865	1,941	2,010
	(Cents per Pound)										
Broiler Price	37.5	37.5	38.0	37.0	33.0						
Turkey Price	43.0	40.0	40.0	45.0	44.0	41.0	36.0	35.0	42.0	42.4	41.0
Egg Price (Dozen)	66.3	59.2	53.1	51.6	52.0	50.7	49.7	64.5	65.2	49.0	53.3

* Broiler data discontinued after 2000 to avoid disclosing individual operations. Broiler receipts show up in the livestock receipts estimate.

Dairy

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	(Thousand Head)										
Milk Cows on Farms	182	177	170	159	154	145	137	129	122	117	115
	(Pounds)										
Production Per Cow	13,423	13,345	13,924	14,069	14,662	13,441	14,204	14,620	15,139	15,186	15,482
	(Million Pounds)										
Milk Production	2,443	2,362	2,367	2,237	2,258	1,949	1,946	1,886	1,847	1,772	1,775
	(Dollars per Cwt)										
All Milk Price	15.10	13.70	15.60	14.70	12.10	14.90	12.30	12.60	16.40	15.51	13.91

Missouri Cash Receipts

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
(Million Dollars)											
Crops	2,398.5	2,625.3	2,276.0	1,776.2	1,879.4	2,049.8	1,983.3	2,572.5	2,756.1	2,336.2	2,361.4
Corn	693.3	670.3	583.8	436.7	556.7	623.8	513.0	720.4	787.6	615.4	645.6
Sorghum	92.4	77.5	46.6	35.2	36.3	42.0	34.1	38.8	31.6	22.5	23.7
Hay	99.4	111.3	120.1	121.1	117.8	156.2	145.4	139.3	135.3	130.8	131.3
Wheat	170.0	194.0	128.3	85.4	126.6	97.1	106.2	142.1	161.5	95.0	121.9
Rice	54.4	57.6	63.6	58.3	48.8	46.7	41.1	56.7	92.3	91.3	81.9
Soybeans	915.5	1,155.2	1,007.8	743.1	731.0	775.9	848.1	1,049.5	1,183.6	990.0	966.4
Cotton	213.1	192.6	161.4	126.8	100.0	121.9	116.7	249.2	198.0	222.3	220.3
Other Crops	160.3	166.8	164.6	169.4	162.3	186.3	178.7	176.6	166.3	168.9	170.1
Livestock	2,497.1	2,771.8	2,470.0	2,501.3	2,681.5	2,694.9	2,283.8	2,596.1	3,062.6	2,927.3	2,827.0
Cattle and Calves	643.9	924.8	758.9	870.4	1,044.8	926.3	821.4	1,077.3	1,131.6	1,173.0	1,142.8
Hogs	696.0	741.1	541.8	453.3	589.1	602.0	417.3	456.1	623.3	570.1	529.4
Dairy	363.0	319.1	364.6	324.3	269.7	286.2	236.0	234.4	298.8	270.9	243.6
Broilers	397.2	403.1	416.7	430.9	356.4	449.4	376.9	397.9	550.3	481.8	485.7
Turkeys	231.8	225.1	239.4	277.2	272.2	270.6	281.8	253.3	279.9	272.1	257.4
Chicken Eggs	92.5	84.8	76.6	72.7	69.9	75.6	76.1	100.0	101.4	79.2	89.2
Other Livestock/Poultry	72.8	73.8	72.1	72.6	79.3	84.8	74.3	77.1	77.3	80.2	78.8
Total Receipts	4,895.6	5,397.1	4,746.1	4,277.5	4,560.9	4,744.8	4,267.1	5,168.5	5,818.7	5,263.5	5,188.3

Missouri Production Expenses

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
(Million Dollars)											
Farm Origin	1,188.3	1,223.7	1,158.6	1,216.1	1,237.0	1,325.7	1,228.4	1,299.4	1,307.2	1,375.6	1,360.1
Purchased Feed	846.3	841.4	737.8	777.4	785.7	837.6	765.9	800.0	830.0	860.3	864.5
Purchased Livestock	161.0	186.2	208.1	229.5	233.4	245.2	227.9	239.4	217.2	251.3	240.7
Seed	181.0	196.1	212.7	209.2	217.9	242.8	234.5	260.0	260.0	263.9	254.8
Manufactured Inputs	932.0	934.5	932.4	880.4	935.1	922.9	853.0	816.5	930.9	1,029.9	1,096.0
Fertilizer and Lime	411.4	406.9	417.9	383.0	394.4	402.5	372.4	370.0	450.0	498.7	543.2
Pesticides	293.3	289.2	291.9	273.6	268.9	257.2	230.8	200.0	210.0	203.7	209.7
Petroleum Fuels/Oils	171.4	176.3	165.6	163.7	214.0	195.0	184.5	180.0	204.2	242.9	251.6
Electricity	56.0	62.2	57.0	60.1	57.9	68.2	65.3	66.6	66.7	84.7	91.4
Other Intermediate	973.0	1,005.1	1,071.7	1,121.7	1,119.1	1,156.7	1,136.0	1,082.8	1,064.0	1,117.2	1,140.1
Repairs & Maintenance	382.8	378.4	392.9	419.3	430.9	441.8	431.2	343.9	385.1	373.7	365.1
Mach. Hire & Cust. Work	87.1	90.4	104.9	100.4	110.3	100.8	97.9	75.6	79.2	85.3	84.2
Mrketing, Storage & Trans	83.8	81.5	85.2	92.4	90.7	91.5	71.5	96.3	93.5	106.1	114.5
Contract Labor	15.6	10.0	10.7	14.5	18.7	12.4	19.3	13.9	13.6	11.7	13.5
Miscellaneous	403.7	444.8	478.0	495.2	468.5	510.3	516.1	553.2	492.5	540.4	562.8
Other Overhead	1,873.8	1,881.9	1,940.2	1,932.5	2,054.3	2,034.2	1,921.3	2,035.3	2,042.4	2,085.7	2,230.2
Capital Consumption	735.7	738.8	756.4	774.4	798.1	826.9	850.5	866.2	910.4	933.5	944.4
Interest	454.1	467.3	481.7	494.5	524.2	479.2	448.8	433.1	444.1	463.3	514.6
Property Taxes	124.2	128.1	132.0	135.4	139.4	137.4	143.2	210.0	220.0	238.8	272.4
Net Rent - Nonoperators	339.5	312.6	299.6	275.6	350.9	331.9	224.3	267.7	230.0	211.4	246.8
Vehicle Reg./Licensing	18.1	20.8	22.6	19.5	24.5	24.9	23.8	12.1	11.5	12.0	12.5
Employee Compens.	202.2	214.2	247.9	233.2	217.2	233.9	230.8	246.1	226.4	226.8	239.6
Total Expenses	4,967.1	5,045.1	5,102.9	5,150.7	5,345.6	5,439.5	5,138.7	5,234.1	5,344.5	5,608.4	5,826.4

Missouri Farm Income

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
(Million Dollars)											
Cash Receipts	4,895.6	5,397.1	4,746.1	4,277.5	4,560.9	4,744.8	4,267.1	5,168.5	5,818.7	5,263.5	5,188.3
Crops	2,398.5	2,625.3	2,276.0	1,776.2	1,879.4	2,049.8	1,983.3	2,572.5	2,756.1	2,336.2	2,361.4
Livestock	2,497.10	2,771.78	2,470.02	2,501.32	2,681.5	2,694.9	2,283.8	2,596.1	3,062.6	2,927.3	2,827.0
Home Consumption	20.9	19.4	17.9	16.4	14.9	13.2	13.4	12.5	14.4	12.2	12.0
Crops	8.9	9.1	9.4	9.6	9.9	8.1	8.5	5.6	4.3	4.3	4.3
Livestock	12.0	10.3	8.5	6.7	5.0	5.1	4.9	6.9	10.1	7.9	7.7
Inventory Adjustment	485.1	-1.6	-79.5	-158.1	90.3	112.4	119.5	-360.7	561.6	-173.7	130.7
Crops	511.4	64.6	-92.1	-119.6	173.0	40.3	18.1	-251.3	481.4	-194.6	111.8
Livestock	-26.3	-66.2	12.7	-38.5	-82.6	72.1	101.5	-109.4	80.2	20.9	19.0
Services and Forestry	631.6	658.2	717.5	762.8	809.4	846.6	926.6	953.7	971.4	974.1	1,086.1
Mach. Hire & Cust. Work	52.8	70.9	60.7	67.0	88.0	62.7	78.5	50.3	56.3	55.6	55.1
Forest Products Sold	8.4	8.5	8.6	8.7	8.8	8.9	8.9	9.0	9.1	9.2	9.3
Other Farm Income	148.1	160.3	205.7	201.7	178.8	202.3	237.9	261.0	230.0	216.0	205.7
Imputed Rental Value	422.4	418.5	442.5	485.3	533.9	572.8	601.3	633.4	676.1	693.2	816.0
Ag Sector Output	6,033.2	6,073.1	5,402.0	4,898.5	5,475.6	5,717.0	5,326.6	5,774.0	7,366.2	6,076.1	6,417.1
Direct Gov. Payments	291.4	278.0	428.0	717.1	869.4	817.0	398.4	538.4	470.3	609.2	606.5
Production Expenses	4,967.1	5,045.1	5,102.9	5,150.7	5,345.6	5,439.5	5,138.7	5,234.1	5,344.5	5,608.4	5,826.4
Net Farm Income	1,357.5	1,306.0	727.1	464.9	999.4	1,094.5	586.3	1,078.3	2,492.0	1,076.9	1,197.2
Real 1997 \$	1,356.7	1,306.0	745.5	472.6	960.3	1,040.4	570.4	996.0	2,167.5	869.0	930.3

Missouri Revised Statutes

Chapter 137

Assessment and Levy of Property Taxes

Section 137.021

August 28, 2005

Grading of land for valuation, agricultural and horticultural land, factors to be considered--split-off, effect of.

137.021. 1. The assessor, in grading land which is devoted primarily to the raising and harvesting of crops, to the feeding, breeding and management of livestock, to dairying, or to any combination thereof, as defined in section 137.016, pursuant to the provisions of sections 137.017 to 137.021, shall in addition to the assessor's personal knowledge, judgment and experience, consider soil surveys, decreases in land valuation due to natural disasters, level of flood protection, governmental regulations limiting the use of such land, the estate held in such land, and other relevant information. On or before December thirty-first of each odd-numbered year, the state tax commission shall promulgate by regulation and publish a value based on productive capability for each of the several grades of agricultural and horticultural land. If such rules are not disapproved by the general assembly in the manner set out below, they shall take effect on January first of the next odd-numbered year. Such values shall be based upon soil surveys, soil productivity indexes, production costs, crop yields, appropriate capitalization rates and any other pertinent factors, all of which may be provided by the college of agriculture of the University of Missouri, and shall be used by all county assessors in conjunction with their land grades in determining assessed values. Any regulation promulgated pursuant to this subsection shall be deemed to be beyond the scope and authority provided in this subsection if the general assembly, within the first sixty calendar days of the regular session immediately following the promulgation of such regulation, by concurrent resolution, shall disapprove the values contained in such regulation. If the general assembly so disapproves any regulation promulgated pursuant to this subsection, the state tax commission shall continue to use values set forth in the most recent preceding regulation promulgated pursuant to this subsection.

2. When land that is agricultural and horticultural property, as defined in section 137.016, and is being valued and assessed for general property tax purposes pursuant to the provisions of sections 137.017 to 137.021 becomes property other than agricultural and horticultural property, as defined in section 137.016, it shall be reassessed as of the following January first.

3. Separation or split-off of a part of the land which is being valued and assessed for general property tax purposes pursuant to the provisions of sections 137.017 to 137.021, either by conveyance or other action of the owner of the land, so that such land is no longer agricultural and horticultural property, as defined in section 137.016, shall subject the land so separated to reassessment as of the following January first. This shall not impair the right of the remaining land to continuance of valuation and assessment for general property tax purposes pursuant to the provisions of sections 137.017 to 137.021.

(L. 1975 S.B. 203 § 3, A.L. 1983 S.B. 63, et al., A.L. 1986 S.B. 476, A.L. 1989 H.B. 181 & 633, A.L. 1994 S.B. 633, A.L. 1997 H.B. 470 merged with S.B. 241)

(1999) Final order of rulemaking by State Tax Commission of regulation valuing agricultural and horticultural land could not be compelled through mandamus action. State ex rel. Missouri Growth Association v. State Tax Commission, 998 S.W.2d 786 (Mo.banc).

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Property Tax and Assessment Practices

Testimony Regarding General Assessment Practices

I. Missouri State Tax Commission (STC), Bruce Davis, Chairman- July 14, 2005

A. Assessment

1. The local county assessor is responsible for assessing all taxable property in his jurisdiction except those that are assessed by the commission
2. The commission assesses personal property of airlines, railroads, electric companies, telephone companies, pipelines, and similar public utilities
3. There are 2 types of assessors, elected and appointed
4. Assessors must base their assessment on “true value in money,” synonymous with the fair market value of the property, except in the case of agricultural property where the true value is based on the productive use of the land
5. Assessment percentage (rate) for different types of property
 - a. Residential- 19% of real property
 - b. Agricultural- 12% of real property
 - c. Utility/Commercial- 32% of real property
 - d. Personal- 33.33% of real property

B. Assessment Plan

1. Each county must develop and implement a comprehensive assessment plan agreed upon by the county assessor, county commission, and the STC
2. The state reimburses local jurisdictions for about half of their assessment costs, provided that the county is in compliance with their assessment plan
3. The plan begins in the even numbered year and frames the tax day (January 1st), providing enough time before and after tax day to gather market information, review properties, determine market tendencies, and adjust assessments accordingly
4. The plan includes a statement, budget, and a detailed timeline of how the plan is to be implemented

C. Valuation and Oversight

1. After approval by the STC of the plan, each assessor follows through with the plan
2. The employees of the STC’s Technical Assistance Section perform routine visits to assist the counties and determine if the county is in compliance with the assessment plan- if the STC finds that the county is not in compliance, the state can withhold state reimbursement funds until the matter is resolved
3. The STC may also issue orders to assessors to enforce the law and assure uniform treatment of property throughout the state (intercounty equity)

D. Calculation of Taxes

1. True Value X Assessed Rate X Applicable Tax Rate = Tax
2. Example: True value = \$90,000
 - Applicable Tax Rate = \$6.30 per \$100 of true value
 - Assessed Rate (Residential) = 19%
 - $90,000 \times .19 \times .063 = \$1,077.30$

E. Ratio Studies

- The STC conducts studies, referred to as “ratio studies” to determine local assessment levels and quality

1. Ratio Study Methodologies

- a. Appraisal Ratio Study (Currently used by the STC)
 - 35-50 parcels are randomly selected within each subclass of property
 - STC staff appraisers gather market costs, market sales data, and market rental information in the county and use the data to establish values for each property
 - Commission appraiser supervisor checks to see if appraisal is in compliance with standards
 - The final values of the parcels are compared to those of the assessor and from that mathematical equation, a “ratio” is established
- b. Appraisal Ratio/ Sales Ratio Hybrid
 - The population is stratified and a statistically validated number of sales is used in each stratum
 - If an adequate number of sales is not available, then appraisals are used to fulfill the statistical requirements
 - The Commission recommends that this be the type of study used to determine the assessment value
- c. Sales Ratio Study
 - Sales are gathered and verified to be arm’s length transactions and not to include personal property, financing incentives, or other factors that may skew their usefulness as market indicators
 - The verified sales are then time adjusted to the tax date, and compared against the jurisdiction’s property tax assessments

F. Appeal Process

1. Informal Meeting with Assessor
2. Board of Equalization
3. State Tax Commission hears the case
4. Judicial Review

G. Authority, Organization, and Functions of the STC

- The STC has 6 basic functions
 1. Equalize Assessments
 2. Conduct de novo judicial hearings regarding valuation and classification appeals from local boards of equalization
 3. Formulate and implement statewide assessment policy

4. Supervise local assessing officials and programs
5. Conduct ratio studies to determine assessment level in each county
6. Assess the distributable property of railroads and public utilities
- The staff of the commission is divided into 5 sections
 1. Administration
 2. Legal
 3. Ratio Study
 4. Original Assessment
 5. Technical Assistance

H. Impediments to the STC's duties

1. Certificate of Value
 - Assessors are required to assess property based on market value
 - In 111 of the 115 districts, sales information can only be gathered if a buyer or seller is willing to provide it voluntarily
 - The STC has a more difficult time gathering sales information than do the local assessors
 - Without data, it is extremely difficult for the commission to evaluate the accuracy of a county's assessment program
2. Budget Constraints
 - Over the last 3 years, the STC's budget has been cut by 30%
 - While efficiencies have offset some of these cuts, the STC feels they are inadequately funded to assist and monitor local assessors
3. Litigation
 - When equalizing values or when reimbursement funds are withheld, costly and time-consuming litigation can result
 - The county then may suffer from a loss of funds because the books are closed and tax bills were sent and paid

II. **Missouri Assessor's Association, Shawn T. Ordway and Randy Holman- September 7, 2005**

A. Challenges

1. Disparity of resources from county to county- each county is different relative to economic trends, property types, market conditions, external influences, etc.
2. Difficulty in obtaining adequate sales data- certificate of value
3. Personal property requires a disproportionate amount of resources while representing a small part of assessed property
4. CAMA software requires much maintenance, high labor effort, and is not uniform throughout Missouri- different counties use different types of CAMA software
5. Most counties do not have the resources to hire commercial appraisers
6. Must meet the demands and expectations of the public and make their records available to the public
7. Must defend their valuations in appeal processes- the association does not have the resources to hire experts to defend the valuations

8. Staff Turnover- Many staff members work for the association for training and experience purposes
9. The 2 year cycle is necessary but expensive
10. Adequate and secure funding

B. Strengths of Current Assessment Practices

1. High degree of scrutiny from the General Assembly, the State Tax Commission, political subdivisions and taxpayers, causing assessment officers to make records more readily available to the public
2. The State Tax Commission has general oversight of county assessors and assessment practices
3. The 2 year assessment cycle allows for in-depth and individual analysis of each county's assessment program
4. The education and training of assessors is provided by the Missouri Real Estate Appraisers Commission and normally taught by I.A.A.O. instructors
5. The staff is knowledgeable and competent
6. Strong set of property assessment laws that have withstood the test of time

C. MSAA involvement in Assessment Practices

1. Provides I.A.A.O. level education classes, twice per year, for all assessors and their staffs
2. Produces the Personal Property Valuation Guide used statewide in the valuation of vehicles
3. Organizes the annual conference for assessors
4. Meets with the STC to establish livestock values on a yearly basis
5. Communicating the position of assessors on several bills
6. Communicating with other state and local agencies
7. Regional groups hold regular meetings to keep assessors informed and hear concerns regarding assessments
8. MSAA website, which will go live in September 2005

D. Suggestions to Benefit the Assessment Process

1. Certificate of Value- to address Challenge #2
2. Regional Commercial Appraisers- to address Challenge #5
3. Updated hardware and software system- to address Challenge #4
4. GIS- Digital Mapping
5. Building permits to track new construction- some counties do not have a building permit system
6. Central repository for commercial and other sales for statewide assessors' use
7. Adequate personnel resources- to help with on-site reviews
8. Proficient training and resources for staff
9. More funding/money resources

E. Conclusions

1. Assessors do an enormous workload, are held to extremely high standards on a tight budget

2. Assessors job is to equalize assessments providing uniformity, consistency, and fairness to the property tax system
3. Personal property functions take a disproportionate time of assessors' time and resources
4. Assessors lack an adequate sales reporting system, updated software/hardware, etc. that would greatly improve the assessment program in Missouri
5. Progress is being made to communicate and work together with interested parties
6. The MSAA welcomes any suggestions the committee may have and stands willing to work with the committee on any and all issues relating to assessment

III. Steve Gardner- UMSL, Public Policy Research Center- August 8, 2005

A. Past Reassessment Practices- 1970s

1. Perceptions by many that assessments were unequal both within and between counties (intracounty and intercounty)
2. George Lehr, the State Auditor at the time, conducted his own ratio study that showed dramatic differences between the counties at a time when the State Tax Commission was routinely reporting virtually all counties in compliance with the legally prescribed levels, adding much credence to what before had been merely a perception
3. A lawsuit regarding St. Louis County assessment practices were moving through the courts
4. Various education interests were claiming that the system in practice was serving them poorly

B. 1979- The Pivotal Year

1. The legislature passed a bill requiring state-wide reassessment, strengthening the rollback law and providing funding for county assessors
2. Missouri Supreme Court ruled that St. Louis County assessment practices were unconstitutional and made clear that the STC had the powers to act broadly to affect equity within counties and between counties
3. The STC ordered all counties to begin planning to implement a complete reassessment

C. The Next 5 Years

1. The STC set up three sub-classes of real property- residential, commercial, and utilities- and designated ratios to each class
2. Three errors were made-
 - a. The STC should have designated a single computer system for the counties' use in property assessment
 - b. The issue of capturing sales prices should have been resolved- Certificate of Value
 - c. Much of property tax law was written prior to the creation of the subclasses and biannual assessments- therefore the progress and

the ability to maintain the improved results were already
compromised by antiquated law

D. The Current Time

1. Current law doesn't acknowledge advances in technology, statistics, the standards of the assessment profession, etc.
2. Current law is out-of-date and often in conflict with the requirements of bi-annual assessment and multiple sub-classes of real property
3. Missouri has no statutory standards by which to measure the adequacy of its assessment results
4. Missouri is the only state of 50 that conducts its ratio study on the basis of appraisals (except California which has a unique system)
5. Certificate of value remains a controversial issue- rural legislators believes that it is an invasion of privacy
6. The legislature continues to enact new education formulas as necessary, but continues to ignore the certificate of value
7. Every two years a ratio study is conducted under far less than ideal circumstances to produce what might be called "magic equivalent ratios"- it seems as though when a county has a low ratio on one subclass of property, it often achieves a high ratio on another subclass- the result is a certification of compliance with overall requirements
8. It is rare that any county is found to be non-compliant- Why?
 - a. The process of using appraisals rather than sales to indicate market value is highly subjective, as is the multiple step appeal process
 - b. It is easier to find compliance when non-compliance entails major consequences, especially when the approach is subjective
 - c. The resources available to conduct the studies are inadequate
 - d. In some cases, strong political pressure is exerted
 - e. Legislatures in the past made it clear that they did not want a good ratio study
 - The statutes requires that if a county initially fails, the assessor can select properties to re-argue value
 - If still found non-compliant, the school district argues the value- generally meaning the assessor again
 - If still found non-compliant, the county may use the current year or the average of the best 3 of 4 years
 - Somewhere along the line, political pressure is exerted saying that the end result better not be schools or the assessor losing money
 - If the STC orders increased assessments at the local level, the county may not comply- resulting in a lawsuit
9. The rollback laws are incomprehensible, a lawyer familiar with the statute claims that the common interpretation is incorrect

E. Shifting Burdens

1. There has been an increasing burden on residential real estate from about 38% to about 48% of the total assessed value over the past 15-20 years

2. From 1984-Present, the share of agricultural burden has plummeted from about 12% to less than 3% of the total property tax revenue
 - a. The reasons for these changes are not known specifically, but the productivity values used by the STC on agricultural property are the same as in 1995, and less than in 1985
 - b. The studies that the STC commissions every two years from UM's Department of Agriculture suggests that the STC's values are not the appropriate ones
 - c. A great deal has happened over the course of the past 20 years to which the legislature has paid little attention
- F. 3 Suggestions to the Joint Committee on Tax Policy
 1. Ensure that the state aid for education uses good data
 - a. What if 1/3 of counties are assessing meaningfully below the state level, and 1/3 are assessing meaningfully above the level- billions of dollars would go to the wrong schools
 - b. It is the duty of the legislature to do whatever it takes to assure that the correct information regarding local need and local ability is plugged into the formula so that the next 30 billion dollars of schools aid goes to the right districts
 2. Missouri needs a systematic review of the laws and practices regarding the property tax- explanation for which is earlier in the testimony- one suggestion is to focus on intra-county value-setting and equalization in odd years, followed by a good ratio study providing adequate evidence for inter-county equalization, and complete the process with inter-county equalization in even-numbered years
 3. The state needs a strong State Tax Commission to enforce property tax assessment statutes

IV. Missouri Growth Association, Sandy Rothschild- August 8, 2005

- A. The Argument as to Why There is No Equalization
 1. There are no valid equalization studies performed by the State Tax Commission as required by law
 2. No equalization studies are available to boards of equalization and, thus, no board of equalization fully performs the duties imposed by statute
 3. The lack of equalization raises serious questions as to whether Missouri's property tax system is operating in compliance with constitutional requirements
 4. Many statutory provisions enacted before the State adopted three subclasses of real property (agricultural, commercial, and residential) are vague because it is unclear how the subclasses are to be handled
 5. Duties of the State Tax Commission are too broad and conflicting:
 - a. The STC supervises local assessors and boards of equalization
 - b. Hears contested assessment cases
 1. The STC has a preference for hearing cases versus issuing rules or supervisory orders

2. This way of handling issues violates the principles of uniformity because STC decisions do not establish a mandatory precedent; other counties do not have to follow the ruling and few assessors feel bound when the decision is in their county
3. The STC preference for waiting for contested cases rests, at least in part, because the Commission is granted a superior recognition as an authority when its decisions are review that does not exist when its rulemaking is reviewed or when it exercises supervisory authority. This policy ignores the cost to taxpayers and harm done by delay and uncertainty within the property tax system.
- c. The STC performs the only study that determines how well it has performed its supervisory duties over assessors. If this approach to grading were extended to Missouri public school children, we would have a State of straight A students.
- d. The STC acknowledged to the General Assembly that its funding is inadequate for it to properly perform all its duties and that it cannot perform those duties without a statewide certificate of value
- e. The STC is the State's expert on the subject of property taxes. It has called for enactment of a certificate of value for the past quarter century. Without a COV, it has repeatedly acknowledged that it and local assessors cannot adequately do their jobs. The question that should concern the General Assembly is how will a court treat these admissions from the State's expert?
- f. The STC hires hearing officers who also assist in developing Commission policy. If a case involves the legitimacy of one of their policies, will the taxpayer receive a fair and impartial hearing? Senator Loudon has announced plans to move all hearing officers to one agency. I endorse the recommendation.
6. Reports by the media regarding plaintiffs in the school funding lawsuit are inaccurate: my wife and I are plaintiffs on behalf of ourselves and the Missouri Growth Association. The plaintiffs are not exclusively school districts, contrary to media reports. And, as the commission has written, "The financial foundation of... public schools [is] dependent on the stable and reliable revenue source provided by the property tax."
- B. Provisions are Ignored by Assessors, Boards of Equalization, and the STC
 1. Many assessors fail to revalue property every two years as required by law. Despite this failure, the Commission still provides reimbursement.
 2. The technology utilized by many assessors is woefully outdated and unlikely to produce reasonable approximations of true value of money. Many small counties cannot afford to hire the technical expertise required in a mass appraisal setting to reliably have values approach true value in money.
 3. In the past five years or so, there has been an unprecedented rate of turnover of county assessors.

4. Reassessment plans call for all properties to be reinspected once every six years. In St. Louis County, according to a study in 2001 in conjunction with the “Drive-by Assessment Scandal,” ten percent of the counties parcels did not have qualifying inspections with some parcels showing the last inspection 20 or more years earlier.
5. There are numerous statutory declarations that there is no presumption that the assessor’s valuation is correct. Because there is no review of BOE proceedings, this dictate is widely ignored and taxpayers are unaware of its existence. The STC could/should monitor whether taxpayers are being treated according to law, but does nothing.
6. Before the assessor may increase the assessed valuation of any parcel of subclass (1) real property by more than fifteen percent since the last assessment, excluding increases due to new construction or improvements, the assessor shall conduct a physical inspection of such property.
7. Key points
 - a. The STC supervision of local boards of equalization is virtually non-existent.
 - b. The STC justifies its failure to supervise assessors and boards of equalization because its appeal hearings are de novo. This interpretation simply denies due process of law to property owners at board of equalization hearings.
 - c. Because so many statutory provisions are routinely ignored by assessors, boards of equalization, and the STC, Missouri’s property tax system may operate in a manner that consistently denies taxpayers due process of law.
 - d. The STC is of dubious accuracy. From personal experience, I have heard how some parcel appraisals stay in a county’s study while others are removed. In two words, it was “horse trading.” The merits or deficiencies of the contested appraisals were never discussed. It was a situation where the assessor and field appraiser agreed to “take these five out and leave these seven in.” Further, I have talked with former STC field appraisers, who acknowledge that their valuation numbers were altered after they had completed their work- by a STC higher-up who had no appraisal background or training and who had never inspected the subject parcel.
 - e. From personal observation, the STC appraisal work often was filled with errors. My knowledge comes from properties I represented and knew the occupancy level, rental rates, operating expenses, actual square footage and other relevant considerations. If the assessor had erroneously measured a building or disregarded the flood plain, those same errors would appear in the STC appraisal.
 - f. In a study determining the accuracy of STC ratio study appraisals sponsored by both the Missouri Growth Association and the Public Policy Research Center at UMSL, two out of three appraisals

showed substantial differences in two of the three assessment jurisdictions.

C. Recommendations

1. The duties of the STC should be divided so as to end internal conflicts. Supervision of assessor boards of equalization should be the Commission's primary duty. Hearing contested cases should be switched to another agency. The equalization study should be performed either by the State Auditor, since it measures how well the Commission is performing its duties, by some other agency (which could include one or more campuses of the University of Missouri) or a private company. There are several states that contract for their equalization study with a private vendor.
2. Having 115 county assessors is highly inefficient and produces substandard results. It also introduces an inordinate amount of political pressure into assessment practices. If Missouri had 4-6 assessment districts, the economy of scale would enable each district to acquire the appropriate technology and staff expertise that is all too often lacking in many assessor offices. If the changeover were to occur in 2008 or 2010, assessors and assessment personnel could plan for the change without suffering a sudden disruption.
3. Much of the testimony has criticized the performance of the STC; however, the STC is correct that a Certificate of Value is essential for assessors to perform their duties adequately. The Commission has been correct in its advocacy of a COV and we think this may carry considerable weight with the courts. A COV is also essential if the STC is to perform the Sales Ratio study called for by state statute. Having COVs would also enable the timely preparation of an equalization report while the first round of taxpayer appeals are being considered.
4. Lawsuits challenging the STC's orders should be filed either in Cole County, where the courts are accustomed to state agencies being sued, or a neutral county circuit court.
5. How equalization is to occur needs to be clarified.
6. The appeals process does not work well and frequently ignores the rights of taxpayers. There is a lack of communication between boards of equalization and the STC, and there is no standard for how boards of equalization are to administer their duties.
7. The legislature has passed numerous statutes imposing evidentiary burdens upon the assessor in residential cases. The appeals process needs greater accountability for property owners and for innocent taxing jurisdictions whose tax base is put at risk by uninformed and indifferent administrative enforcement.

V. **Ronald E. Levy- Property Owner- August 8, 2005**

- A. Missouri needs 1978 Proposition 13 of California where homeowners pay a tax on the purchase price of home

- B. Reassessment should be capped every year at 2% or to the realized growth of the Consumer Price Index
- C. Personal Property Tax should be eliminated
- D. Missouri is losing business due to the personal property tax

VI. Carl Sandstedt- St. Charles City- County Library District- August 8, 2005

- A. Personal Property- STC wholesale abandonment of assessments, large companies got depreciation, many pop stores paid full amount
- B. Missouri should reset everything, so no more personal property tax and shift it over to real property tax
- C. Overall, wants simplification

VII. JoAnn Rudroft- Resident of Florissant Speaking on Senior Citizen Issues- August 8, 2005

- A. Real Estate Taxes should be frozen for senior citizens until property is sold
 - 1. The loss of revenue that would occur from this plan would have to be replaced by Missouri's General Revenue fund
 - 2. Missouri would not be able to recover its loss of GR funds until the house is sold or inherited by a relative other than the spouse of the owner
 - 3. Senior Citizens must be at the point of poverty to be eligible for plan
- B. Senior Citizens are taking jobs from young to pay for property taxes

VIII. Missouri National Education Association, Otto Fajen- August 8, 2005

- A. TIFs- tax reduction incentives should only be granted on the basis of need
- B. School Districts should be able to keep whatever growth is realized by the Consumer Price Index
- C. Reassessment impact- likes the idea of separate rollbacks for the different types of property
- D. Be proactive about reassessments

IX. Vanguard Appraisals, Bob Kocer and Robert Ehler- October 24, 2005

- A. Vanguard assisted Iowa with reforming reassessment services
- B. The system used by Vanguard is the system used by 150 jurisdictions in the Midwest, 32 in Missouri- it is approved by the I.A.A.O.
- C. System promotes uniform evaluation of and between properties
- D. Iowa developed a centralized manual for assessments instead of a centralized software system
- E. Iowa Department of Revenue then conducts classes to teach how to interpret and implement the manual

X. Public Policy Research Institute, Steve Gardner- December 5, 2005

- A. It is Constitutionally required that Missouri equalize the 2.7 million parcels of property in the state
- B. Without equalization, the tax burden is unfair and unequally distributed

- C. There are 115 assessors with different skills, motivations, etc. that will produce different results for the 500 taxing authorities that cross county boundaries
- D. The primary means of achieving equalization is a good quality ratio study
- E. Recommendations for achieving equalization
 - 1. Contract out for a study of the effectiveness of Missouri's rollback laws and oversight and document any problems or concerns- study policy alternatives to address any problems that are found
 - 2. Collect additional sales information. Provide the STC with funding to shoulder the effort of obtaining voluntary sales disclosure. A supplemental appropriation is recommended for a quick start-up. Allow voluntarily supplied sales information to remain confidential within the government. Allow for the STC to enter in agreements with non-governmental parties to obtain and use proprietary information without making the information subject to the sunshine law. Prohibit sales chasing and impose penalties for violations.
 - 3. Prepare for a timely and reliable sales ratio study for use in accomplishing statewide equalization subsequent to the 2009 reassessment. Contract with an independent expert organization to assist in the design, implementation, conduct, and evaluation of the ratio study and related issues, and make recommendations for further improvement.
 - 4. Adopt regulations setting compliance standards that conform to those of the I.A.A.O. for level of assessment, uniformity, and vertical equity. Define the process for measuring compliance as well as a process and timeframe for curing non-compliance.
 - 5. The General Assembly may want to convene an advisory committee composed of representatives of assessors, collectors, county clerks, county courts, county prosecutors, the Missouri General Assembly, and the STC in order to reach a consensus recommendation that will assure effective enforcement while providing counties with reasonable due process. An effective process includes a means certain to resolve differences before mailing assessment change notices. If no consensus can be reached, the General Assembly retains the authority to act, and should.
 - 6. Develop and implement a timetable for all of the changes to the process.
 - 7. Hire an executive director to take charge of the executive functions of the STC. Erect a "Chinese Wall" whereby the commissioners do not participate in these functions, except in two circumstances. First, the STC should retain the authority to accept or deny regulations proposed by the executive staff. Second, the STC should act as an arbiter or final authority in disputes between counties and executive staff. Provide the new director with funds to begin rebuilding the staff and capability of the executive function of the STC as well as some reasonable discretionary funds for tackling issues as they arise.
 - 8. Provide a pool of funds for improvement grants to disburse to counties based on merit, need, local match funds, etc. While the state needs to

- continue to provide base funding on a parcel basis, some of the growth in funding can be performance based- in the short run, meaning improvement. In the longer term, consider awards for excellence, but not until measurements improve.
9. Create a permanent advisory committee with a broad mission to engage all relevant state and local offices and sources of expertise to improve Missouri's property tax administration and use of property data. Local officials represented to include assessor, collector, recorder, and clerk. State executive officials represented to include STC, Auditor, GIS, Attorney General, and Governor. State legislative officials represented to include appropriations, tax policy, and local government policy. Special others to be represented to include various experts from academia or private industry.
 10. Conduct a feasibility study, examining a variety of options for moving toward a standardized statewide software system that is state of the art for all functions related to property as the state and local level. Assign the task to an advisory committee similar to one described in previous recommendation.

*****Testimony Regarding Property Tax Rollbacks*****

XI. Property Tax Rollbacks- Constitutional and Statutory Requirements- Jason Zamkus Memo

A. Article X, section 22 of the Missouri Constitution states-

"if the assessed valuation of property as finally equalized, excluding the value of new construction and improvements, increases by a larger percentage than the increase in the general price level from the previous year, the maximum authorized current levy applied thereto in each county or other political subdivision shall be reduced to yield the same gross revenue from existing property, adjusted for changes in the general price level, as could have been collected at the existing authorized levy on the prior assessed value." Basically, if the assessed value of property within a political subdivision increases by an amount greater than the increase in the general price level, exclusive of new construction and improvements, the political subdivision must roll back property tax rates, adjusted for changes in the general price level in order to maintain revenue neutrality.

B. Section 137.073, RSMo, requires-

"when changes in assessed valuation are entered in the assessor's books, all political subdivisions shall immediately revise the applicable rates of levy for each purpose for each subclass of real property, individually, and personal property in the aggregate, for which taxes are levied to the extent necessary to produce from all taxable property, exclusive of new construction and improvements, substantially the same amount of tax revenue as was produced in the previous year for each subclass of real property, individually, and personal

property in the aggregate, except that the rate may not exceed the greater of the rate in effect in the 1984 tax year or the most recent voter-approved rate."

As provided in Article X, section 22 of the Missouri Constitution, a political subdivision may revise each property tax levy to allow for inflationary assessment growth occurring within the political subdivision. However, the inflationary growth factor for any subclass of real or personal property is limited to the actual assessment growth in such subclass, exclusive of new construction and improvements, and exclusive of the assessed value of any real property which was assessed by the assessor of a county or city in the current year in a different subclass of real property, but not to exceed the consumer price index or five percent, whichever is lower.

C. Summary-

When there is an increase in assessed valuation in excess of the general price level, a political subdivision must roll back property tax rates to maintain revenue neutrality while still allowing for inflationary growth, but such growth is limited to the lower of the increase in the consumer price index or five percent.

XII. Kirkwood Public Library, Liz Walker- August 8, 2005

- A. Kirkwood library has a voter approved tax rate of 24 cents, however complying with rollbacks, it will only levy a 19 cent tax 20% less than the ceiling
- B. Publicly post current tax rate and tax ceiling
- C. 85% of its revenue comes from property tax
- D. The Kirkwood public library gained a little over 3% from new construction
- E. Kirkwood city is rolling back rates
- F. Liz Walker's property tax on her residence is down 8% this year, but it has been up nearly 20% in the past

XIII. David Glaser- Chief Financial Officer of Rockwood School District- August 8, 2005

- A. Property Tax is one of three largest funding mechanisms for schools
- B. Study of assessment practices should be done
- C. Is putting together empirical evidence regarding discrepancies in assessments
- D. Working to do study of 5 counties, then 20 more, then 10 more
- E. Wants the report produced by the committee to have statistically valid numbers and accurately reflect what is going on
- F. Missouri needs a reliable assessment practice so money is distributed equitably under formula

XIV. Tony Hiesberger- Cole County Presiding Commissioner- September 7, 2005

- A. Take a look at jurisdictions that are not lowering tax rates
- B. Gave example of Jefferson City 7-8% increase in assessed valuation without rolling back the tax rates

XV. Chris Straub- Missouri School Board Association- September 7, 2005

- A. Schools get money from state assessed railroad property, etc. based on the average of all the area schools' rate
- B. Missouri Constitution and laws regulate the tax rate ceiling
- C. School districts can levy \$2.75 for operating expenses without voter approval due to Constitutional Amendment #3 (1998)
- D. Residential assessment has been much higher than other types of property
- E. Make everyone have multi-tax rate- it would make reassessment less of a political issue
- F. Raise per parcel appropriation for assessors

XVI. Edward Bushmeyer- City of St. Louis Assessor- August 8, 2005

- A. St. Louis is one of four jurisdictions that has a Certificate of Value requirement- the city of St. Louis provides the STC with a quarterly analysis of the effectiveness of the COV requirement
- B. Home sale values have increased over 50% over the last two assessment cycles
- C. City of St. Louis finds the permit process helpful
 - 1. Permits obtained for construction projects in homes or businesses provide assessors an idea of the value that the construction adds to the property
 - 2. It is still difficult to determine an exact value of the house because they cannot go inside the house to look at its amenities
- D. During the current reassessment cycle, 108,000 notices were sent out to residential properties, 12,000 were sent out to commercial properties
- E. There has been however, a substantial increase of appeals- 682 in all this year
- F. It is extremely difficult for an assessor to predict how much a property owner's tax bill will change over the course of an assessment cycle
- G. Rollbacks
 - 1. 2 years ago- the city had a 2.4% rollback
 - 2. 2004 had a roll-up due to a decline in assessed valuation (personal property)
 - 3. 2005 expects a rollback in excess of 2.4%